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POLICY RESEARCH WORKING PAPER

Analyzing Financial Sectors in Transition

With Special Reference to
the Former Soviet Union

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One result of ignoring the true messiness of the transition from a command to a market economy is that governments are sometimes offered flawed policy recommendations and conclusions that are at odds with reality. Here is a framework for reflecting on certain features of bank behavior during the transition from a command to a market economy — and on public policy interventions for the sector often advocated by the International Monetary Fund, the World Bank, and other donor agencies.

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Summary findings

The economic transition from a command to a market economy is a complex, messy process, during which the incentives of economic agents may be significantly different from incentives familiar to Western economies. As a result, attempts to transplant Western institutional and regulatory norms of good practice into transition economies may produce disappointing, even counterproductive, results.

Roe, Siegelbaum, and King show some specific characteristics of transition economies that are likely to have an impact on bank behavior and safety. They argue that these characteristics do not inevitably fade away as the transition proceeds; indeed, they may endure for an extended period.

This being so, Roe, Siegelbaum, and King propose a simple analytical framework designed to shed light on the characteristics of the banking sector during the transition. This framework relies on familiar theories of asymmetric information and the potential advantages banks have in mitigating both the adverse risk and moral hazard associated with imperfect information.

This framework suggests that the safety of an individual bank (and by extension the system) depends on three factors that evolve significantly during the transition:

- The bank's own internal information and information processing capabilities.
- The sophistication of the banking products it tries to offer.
- The external operating environment the bank faces (an environment that is affected by almost all aspects of transition reform).

Among their many conclusions:

- Bank "safety" is an elusive concept in transition economies, one not easily managed.
- A transitional banking system may be quite "safe" even though regulatory reform may have progressed only minimally.

Their analysis helps to account for several paradoxes observed in transition banking systems, including the relatively long-term survival of banks which by any objective standard are insolvent.

This paper is a product of Ukraine/Belarus Country Unit, Europe and Central Asia Region. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Diana Cortijo, room H2-023, telephone 202-458-4005, fax 202-477-3288, Internet address dcortijo@worldbank.org. The authors may be contacted at aroe@worldbank.org or psiegelbaum@worldbank.org. September 1998. (55 pages)

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ANALYZING FINANCIAL SECTORS IN TRANSITION

With Special Reference to the Former Soviet Union

by

Alan Roe, Paul Siegelbaum and Tim King¹

This is a draft only but any comments and suggestions are most welcome.

¹ Tim King died in a tragic accident at his home in Australia on December 31, 1997 while this paper was being finalized. The paper is dedicated to Tim: an outstanding young economist and the most reliable and genuine of friends.

ANALYZING FINANCIAL SECTORS IN TRANSITION: With Special Reference to the Former Soviet Union²

by

Alan Roe, Paul Siegelbaum and Tim King

Section I: Introduction

1. This paper proposes a framework for analyzing the evolution of financial sectors in economies transiting from command to market structures. Most commentators have tended to regard this "Transition" as an undifferentiated period to be traversed as rapidly as possible. In doing so they ignore the increasing evidence that the Transition can be an extended, even enduring, state of the world, resulting from a complex interaction of economic, political, cultural and psychological factors. As such, it can and does generate incentives which fundamentally distort the behavior of economic agents in unpredictable ways. We argue that one result of ignoring the true messiness of the Transition is that the analysis and policy recommendations offered to governments can be flawed and often provide conclusions which are odds with the reality on the ground. The paper discusses this concern and proposes a simple analytical framework both for focusing on the Transition itself and also for use in defining and evaluating possible public policy interventions for the banking sector.

2. The proposed framework leans heavily on the analytical approach of asymmetric information, which has proved so useful in understanding both the dangers to which banks are exposed in all market-based economies and the special role of banks in the development process.¹ For example, we have learned that, because banks have an advantage in collecting relevant information about current and prospective borrowers, they also have an advantage in limiting the common problems of adverse risk selection (riskier borrowers being willing to pay more for credit) and moral hazard (riskier borrowers being willing to seek badly needed returns by taking greater risk in the deployment of funds). It is widely believed that the special difficulties in acquiring accurate information about private clients in developing economies makes banks even more important in those situations.² These informational advantages of banks also gives them an edge over securities markets in the early stages of development.⁵

² The authors are grateful for perceptive comments from several colleagues including Millard Long, Gerry Caprio, Hennie van Greuning, Alex Fleming, Michael Fuchs, Martha de Melo, Gregorio Impavido, Gerhard Pohl, Fernando Montes Negret, Irfan Aleem, Itzhak Goldberg, S Ramachandran, Alfred Steinherr and Gail Buyske. The paper has been improved considerably as a result of these comments. The deficiencies remaining are entirely those of the authors.

³ See, for example, an excellent recent paper on financial crises. Frederic S. Mishkin, "Understanding Financial Crises: A Developing Country Perspective" in *Annual World Bank Conference on Development Economics*, (M. Bruno and B. Pleskovic), editors, World Bank, Washington DC 1997.

⁴ See L. Rojas-Suarez and S.R. Weisbrod, "Financial Market Fragilities in Latin America: From Banking Crisis Resolution to Current Policy Challenges." IMF Working Paper WP/94/117. IMF, Washington, 1994.

⁵ The issue and trading of securities places the onus on individual investors in those securities to acquire relevant information on the riskiness of the issuer. The literature clearly explains why the balance of the private costs/benefits of this information and screening process is likely to discourage an adequate level of such activity. See for example, C. Mayer, "Financial Systems, Corporate Finance and Economic Development." in R.G. Hubbard (editor), *Asymmetric Information, Corporate Finance and Investment*. University of Chicago Press. 1990. See also

3. In the unique circumstances of the Transition, however, the content, sources and uses of information relevant to bankers are all very different, as are the observed behavior patterns of bankers, their customers and bank regulators. Thus, for example, a portion of the informational advantages ascribed to banks is derived from their special relationships of trust, built on long-term, commercial connections with enterprises. In the early stages of the Transition, however, fundamental ownership and other commercial relationships are “up for grabs” as a result of privatization and other structural reforms, as well as in the realignment of traditional trade links. Wholly new sources of finance⁶ have become available for both privatized and new start-up enterprises, which effectively limit the basis for this trust. From this, we can surmise that the information advantages of banks will be significantly less important in the early stages of the Transition, than in more settled economies. At the same time, it can be observed that Transition banks have been forced to adopt alternative mechanisms to protect themselves from risk. It is important for us to understand these alternative mechanisms, how they arise, how they evolve as the Transition proceeds, how they are effected by various policy reforms and, ultimately, how they ought to influence the policy advice offered.

4. This paper is organized as follows. Section II sketches the main shortcomings of the traditional analyses of the financial sector in transition - particularly the limitations of current thinking on the sequencing of financial sector reforms. Section III introduces and elaborates on the basic framework proposed. Section IV uses the framework to distill some simple but important propositions about transition banking. Section V provides an initial qualitative test of the framework, by using it as a lens through which to view some of the characteristics of transition banks which we have observed. It shows that behavior patterns which, at first glance, seem curious and counterproductive, do indeed have a rational explanation when viewed in relation to the analytical framework we propose. Section VI applies the proposed analytical approach to assess the appropriateness of various interventions -- especially those which have proved popular in the World Bank -- to support the financial sector transition. Two Annexes then elaborate particular aspects of the analysis. Annex 1 assesses how our analysis might recondition thinking about the appropriate regulatory and supervisory structures for transition banking. Annex 2 provides some initial empirical results based on our proposed framework of analysis.

Section II: Limitations of the Conventional Analysis

J.E. Stiglitz, “Credit Markets and the Control of Capital” *Journal of Money, Credit and Banking*, 17 (2, May), 1985. Stiglitz argues that well functioning stock markets quickly reveal information to investors through the rapid publication of price changes. However, this *reduces* rather than enhances incentives to commit private resources to obtain information about the financial situation of enterprises. This is partly because the benefits of that information cannot be easily confined to those who expend the effort in gathering it. Recent theoretical papers have also supported earlier empirical observation that equity market development occurs relatively late in the development process. See, for example, J. Boyd and B. Smith, “The Co-Evolution of the Real and Financial Sectors in the Growth Process,” *The World Bank Economic Review*, May 1996.

⁶ These new sources include not only traditional forms of funding from banks and the capital markets, but informal “funding” from the deferral of payables to employees, the tax collector, enterprise suppliers and energy providers.

5. For economies attempting the transition from a socialist command structure to a capitalist free market structure, the characteristics of the “transition” are fundamentally different from the state of the world previously or subsequently. Much of the accepted analysis in this area describes well the situation just before transition begins, as well as the state which it is hoped will exist when transition is complete.

6. The starting point of transition typically reflects a financial sector dominated by “banks” which are owned directly or indirectly by the State. These “banks” provide resources, in the form of credits, mainly to state-owned enterprises; they enjoy the explicit or implicit guarantee of the State; they have little or no risk management skills; they produce accounts under an accounting system designed to facilitate production planning, as opposed to illuminating their financial condition,⁷ and they are subject to little or no regulatory supervision, although they are closely controlled politically⁸. Their role in the economy is to provide funding, as directed, for the central economic plan. They are usually not in corporate legal form and, under the prevailing legal system, it may not even be possible to distinguish between assets and liabilities owned by them and other state-owned assets and liabilities. This starting point is also characterized by an absence of legal infrastructure, including collateral and bankruptcy legislation defining debtors’ and creditors’ rights, little or no securities market activity, no system of private housing or other specialized finance and little or no private insurance or pension activity.⁹

7. By contrast, the vision of the terminal point as seen by leaders in transition economies and their advisers would be familiar to a European or American banker.¹⁰ It is characterized by mainly private banks, with universal licenses, offering a wide range of sophisticated financial products, supported by strong collateral, bankruptcy and other laws, publishing accounts on a sophisticated basis acceptable under international standards. These banks are subject to Basle Committee-based prudential standards enforced by an effective regulatory system administered with some seriousness, normally by a modernized central bank. The terminal point also involves relatively deep and well-regulated securities markets, dealing in both government paper and private debt and equity issues, as well as some significant level of specialized finance, private insurance and pension activity.

8. This is all well and good. However, our practical experience of transition thus far suggests that the journey from “A” to “B” is scarcely a simple or well-mapped one which every country will complete at the same speed, in the same sequence, or indeed with inevitability. Thus, the broad and crisp consensus about how to characterize the starting and ending points of

⁷ The Gosbank accounting system effectively treated banks as if they were in the business of production – in this case, producing loans, payments, savings, etc. The result was a great emphasis on the raw statistics of a bank’s current operations, with little or no information on information which was relevant generally to the financial health of the institution, such as capital, income or profitability, let alone risk.

⁸ Banks in China today would be a relevant and important example of this phenomenon.

⁹ Although, prior to the break-up of the former Soviet Union, life, health, disability and property insurance was available through the State-owned monopoly insurance company (*Gosstrakh*), this system was essentially destroyed by the effects of the post-Independence inflation in the FSU, which virtually wiped out all insurance reserves.

¹⁰ There has of course been active debate about whether the terminal state of the sector should be modeled according to the Japanese/German model or more by reference to a US system (pre-1996). However, this debate also fails to throw much light on the nature, pace and sequencing of the transition process itself.

transition, provides few, if any, insights about the nature, speed and sequencing of the transition itself. This gap in our knowledge is a serious problem. Without such insights, how can we know which public policy interventions are needed at any particular stage of the transition? What are the incentives operating at various points during this period and how do those incentives interact with the interventions employed? How should governments and external agencies respond to “crises”¹¹ in the banking sector which occur while the transition is still on-going? In reality, thus far, we have been able to do little more than assert that *all* institutional and other differences between the starting and ending points need to be resolved *at some stage*. Thus, we have concluded that for most countries on which we have worked, financial sectors in transition need improved laws and accounting, better governance and risk management skills, stronger and less political regulation and supervision, as well as a private sector customer base. We have also argued that some interventions, reflecting extensive institutional strengthening, should be started early because they involve a long gestation period.¹² But beyond this we have had little basis for attaching priorities or a time sequence to possible interventions. In reality, decisions as to the things done first have often reflected local political and other considerations -- such as the presence of an energetic adviser in a key area -- as opposed to any consistent analytical argument.

9. To illustrate the proposition outlined above, consider the case of the typical early transition bank, confronted with the typical efforts at financial sector reform we have seen thus far. With state ownership of both the bank and of the large majority of the bank’s borrowers, this bank is arguably “safer”¹³ than a typical bank in a developed market economy. The bank neither knows nor probably cares that many of its clients would be categorized as poor credit risks under market principles. The information which would condition the behavior of a bank in a market economy is of little importance, and financial information about its borrowers is of little or no utility. If its loans are not repaid, the bank is likely to be compensated by the budget. Even if no compensation is forthcoming, the resulting depletion of capital is of no concern, since Gosbank accounting will fail to identify the problem. Moreover, as a state entity, the bank will not be allowed to “fail” and, in any event, there are no mechanisms to enforce that “failure” even if it

¹¹ There are a number of semantic problems raised by the concepts discussed in this paper. Several paradoxes associated with transitional banking can be explained by noting that certain familiar technical terms carry connotations (in common parlance) which do not easily translate to the different cultural and incentive structures of transitional economies. The precise meaning of the concept of a “banking crisis” is but one example. Many transition banking systems both in the FSU and in major countries such as China are well-known to include major banks which are technically insolvent. But it is now clear that this situation can persist in stability for many years with none of the outward and visible signs which we normally associate with “crisis” (e.g. Indonesia in 1998). The explanation developed later in the paper is that because the state authorities in early transition economies have neither the incentives or the tools to act against such insolvent banks, a situation with all the features of crisis is not necessarily associated with the imperative to take action immediately i.e with “crisis” as we understand it in common parlance.

¹² While logical, even these conclusions may not reflect the realities of the transition environment. In virtually all the transition economies, for example, building a modern framework and capacity for supervising banks has been amongst the first priorities. Yet it remains unclear whether such a framework has, in all cases, served to reduce systemic risk, as desired, and provided the foundation for financial sector deepening. In some cases, where real sector reform has lagged, the additional regulatory framework seems to have served, at least as effectively, as a vehicle for political domination of ostensibly private banks, and a basis for the corrupt sale of regulatory favors and forbearance[see also Annex 2].

¹³ The term “safe” is also a semantic minefield in the context of this paper. Some of the issues involved in its definition are discussed in footnote 16 below.

were to occur. If this typical bank happens to have some household depositors, these depositors know that the bank cannot fail and they thus have no need to withdraw their deposits to preserve them. As a result, they would have no interest in information that might cast light on the portfolio or financial prospects of this bank. The asymmetric information which can cause problematic behavior by depositors in a market economy is also of little importance.¹⁴ Contagion effects stemming from problems in any one individual bank are unlikely. Technical insolvency in a large part of the banking sector can persist for long periods of time without creating serious problems. The technical analysis and information to establish and reveal the problem is not in place and the incentives of agents to respond is in any case limited. China's ability to escape the recent financial turmoil in East Asia is a current and striking example of this point. No one believes that China's banks are inherently sounder than those in, say, South Korea or Japan. But, because the control system in China is such that its banking problems do not easily show up, there are no real mechanisms through which these problems easily translate into "crisis." Nor, indeed, are the incentives aligned in a way that are likely to motivate action.¹⁵

10. The hypothetical early transition bank described above is an integral part of the state budgetary system, which explains the seeming paradox that a bank which may be deeply insolvent generates none of the systemic dangers that would arise in a mature market economy.¹⁶ Management failures and financial insolvency in such as bank are no more a threat to the stability of the financial system than would be similar problems arising in the case of a large, state-run hospital. Both, of course, have major implications for fiscal probity and so for monetary stability, but not through the domino potential of runs on the banking system and other contagion effects which are present in more mature banking systems.

11. Although drawn in extreme terms, this example makes it obvious that a financial sector comprised solely of "banks" functioning like that in our example, requires very little in the way of public policy interventions to defend system stability. Such a system can be shown to be likely to support excessive levels of investment and a poor allocation of that investment.¹⁷ But the

¹⁴ Asymmetric information is generally argued to do its damage in this context by signaling that the known failure of one bank may be indicative of more general failure in the system. Although a depositor has inadequate knowledge to know which banks may fail after one initial failure, that lack of information may prompt the play-safe strategy of withdrawing from all banks pending some clarification of the situation. Hence a run on banks is very definitely a problem explicable in terms of asymmetric information.

¹⁵ The issue here is why would authorities in a country such as China where 40% or more of loans are non-performing but there is no actual crisis, take the actions which might well set off such a crisis? A possible answer is suggested in the next footnote.

¹⁶ It is nonetheless necessary, to question whether such banks can really be categorized as "safe." The suggestion made is that while they may be safe for a time, as far as depositors are concerned, they are certainly very unsafe from the perspective of taxpayers since there is a contingent liability somewhere in the future which is likely to fall disproportionately on the taxpayer. Indeed, the gradually increased awareness of governments that losses on directed credits will come to represent an unacceptable burden on the budget may well be the trigger that forces serious financial reform at some stage of the transition. Hungarian experience probably represents a good example of this point but it is as yet harder to find good examples in the FSU. As much as anything, this example highlights the fundamental blurring of the roles of individual taxpayer and household saver in the classic Socialist command economy.

¹⁷ One demonstration of this point is that proposed by Paul Krugmann in terms of the so-called "Panglossian" approach to finance. This is the over-emphasis in the making of investment and credit decisions on the higher end of the likely returns from such investments and the neglect of the expected or most likely rates of return. See for example, P. Krugmann, "What happened to Asia" Krugmann website, January 1998.

technical insolvency which would ring alarm bells in more mature banking systems is a fundamentally different issue - of no real concern - in the early stages of the transition, and we should recognize that reality. Equally, the preponderance in any banking system of such "banks" should warn us that attempts to transplant institutions and regulatory approaches coming from Western systems will, at best, be alien to the culture and incentives driving behavior in early transition financial sectors. Thus, a Western system of banking supervision will, at best, be alien to transition banks and the authorities that oversee them. Similarly, good collateral laws, improved accounting standards (in banks or in their enterprise clients) might seem desirable but can hardly be argued to represent priorities while the banking sector is of the type described. Moreover, twinning arrangements and other forms of technical assistance designed to improve banks' internal management and information systems are likely to fall on stony ground, precisely because the governance and incentive structures in these banks provide no useful context for the use of improved systems.

12. The potential costs of a failure to take the local culture and incentive structure into account in policy interventions are manifest as a waste of advisers' time, but can also be more serious than this. Without appropriate changes in incentives, the enforced adoption of the foreign "cures" may have serious negative consequences. For example, where the taxation of bank profits is punitive, as is the case in many FSU countries, substantial negative consequences flow from introducing greater transparency through Western accounting and loan loss provisioning techniques. Complex prudential regulations and *discretionary* principles of bank supervision can present new and lucrative opportunities for rent-seeking on the part of politicians and bureaucrats, especially where social and legal controls on corrupt behavior have been weakened in the transition.¹⁸ Even the presence of modern collateral laws can have negative consequences, where the judicial system remains weak and corrupt.¹⁹

13. The example given also hints at the difficulties which arise from emphasizing bank privatization too early as a financial sector reform priority. Not only is the franchise value of the "bank" described above likely to be low, but the environment in which a newly-privatized "bank" would be constrained to operate is hardly conducive to the formation of private banking skills. For example, the monitoring and risk-screening responsibilities which the mainstream literature ascribes to banks is of little use when most of the bank's clients remain state-owned enterprises, and they cannot easily be denied credit. And underdeveloped accounting and

¹⁸ The actual relationship between increasingly sophisticated regulations and corruption can be complex and non-linear. Prior to the transition, for example, there were relatively few discretionary decisions vested in bank regulators which could be "sold" to bankers. Immediately after the break-up of the FSU, the system of enforcing administrative decisions, like so much else, broke down and bank regulators had virtually no power to enforce their decisions, which severely curtailed the "bribe value" of their discretion. Subsequently, as legislation and regulations have been modernized, and the courts become more reliable enforcers of regulatory actions, discretionary regulatory decisions naturally acquire greater value and are more likely to attract improper rent-seeking.

¹⁹ Transition bankers have been quick to appreciate that, in an environment where loan repayment is heavily influenced by politics and other similar considerations, conventional collateral is not an effective risk control device. At the same time, the ability of borrowers to create mortgages and other security interests in favor of third parties presents banks with serious risks. The result has sometimes been a defensive strategy by bankers, designed to acquire collateral rights in all of an enterprise's assets, simply to hold other creditors at bay. As a result, enterprises are prevented from realizing the full financing value of their assets and are hampered in the most efficient management of their business.

supervisory systems do little to substitute for the politics of state ownership in checking excessively self-interested exploitation of the opportunities afforded by a public banking license. Under these circumstances, privatizing the bank does little to improve the quality of the banking sector overall, and may open the door to seriously counterproductive behavior.

14. A final introductory comment on the inadequacies of the conventional analysis of the transition relates to the absence of linkages between the general macroeconomic prescriptions offered by the IMF, the World Bank and others, and the impact of such actions on the financial sector. The established asymmetric information literature makes it clear that contextual factors like interest rates, exchange rates and structural reform can have a profound impact on the way banks operate, as well as on their safety.²⁰ Yet in practice, the standard advice proffered by the Bank and by others seems more or less insensitive to these insights. Thus, stabilization and liberalization of interest rates have invariably been advocated as two fixed points in early stage financial reform. The *quality* of these reforms is rarely discussed as a matter of major concern -- for example, are they consistent with real interest rates only temporarily out of line with long-term sustainable levels? This can be a serious blind spot, since a reform characterized by an extended period of high real interest rates is a different animal from one which is not so characterized. The former would be in direct conflict with the objective of building a stable banking sector able to operate according to market principles.²¹ Moreover, without the development of a stable and growing banking system, the remonetization and monetary stability of any economy is likely to remain elusive. The framework outlined below attempts to deal with this and other major problems of the conventional approach.

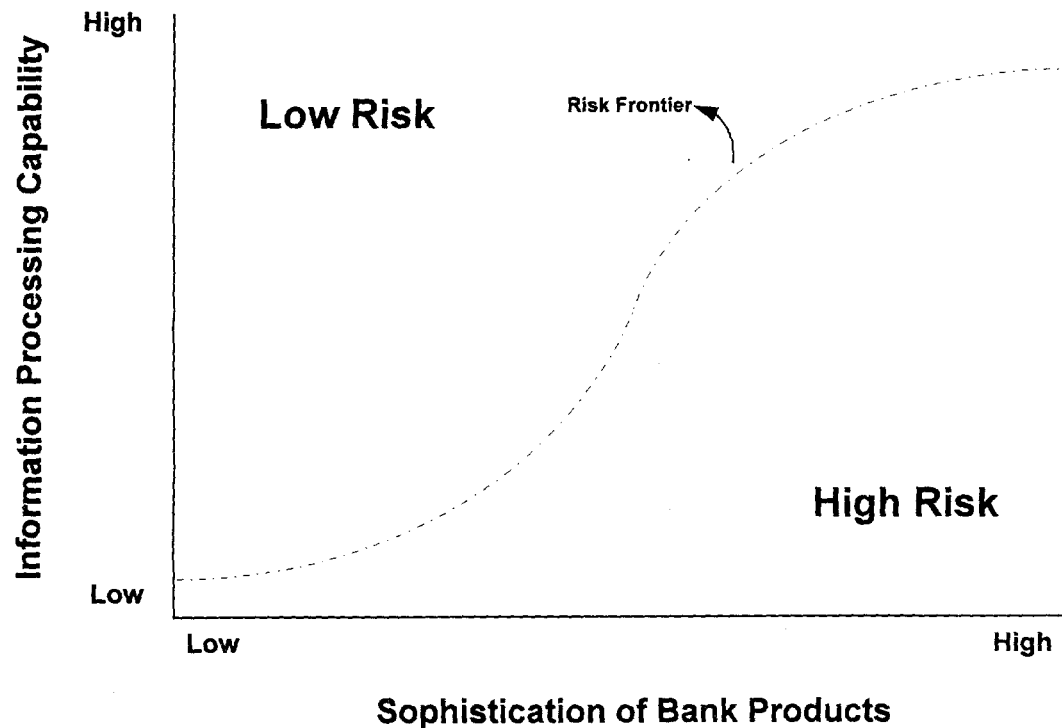
²⁰ Thus, for example, a major rise in interest rates will invariably intensify the problems of adverse selection - with the worst borrowers seeking to borrow more and the best borrowers seeking to borrow less - as well as damaging the balance sheets of borrowers.

²¹ It is clear from the asymmetric information framework that any economy forced to operate with high positive real interest rates for a lengthy period of time is either going to finish up with a very unsound banking system, or substantially eliminate banking activities involving the channeling of credits to productive enterprises.

Section III: The Main Elements of a New Framework

15. A schematic view of the proposed new framework in its simplest form is presented in *Figure 1*. The (left side) vertical axis in the diagram refers to the effectiveness of any given bank in gathering and processing information in a way that reduces problems associated with adverse selection and moral hazard in its lending decisions. This capacity - referred to as *Information Processing Capability* in the diagram - is a function of the individual bank's ability to collect and process information about the economy in general and specific enterprises in a way that generates valid conclusions of relevance to the banks profitability and risk profile. The greater a bank's capacity to deal with information in this way, the greater will be its ability to avoid bad borrowers (adverse selection) and to screen and limit excessive risk-taking by those borrowers which it does accept (moral hazard).

Figure 1: Banking Sector Risk Frontier



16. The horizontal axis represents a continuum of commercial banking activities and products, with the operational complexity increasing cumulatively with moves to the right along the axis. The least demanding, such as providing directed credits to state-owned enterprise or operating the payments system, fall to the far left on this axis and require little information processing skills for the reasons given earlier. More

sophisticated activities such as short - and medium-term commercially based lending, long-term commercial lending and foreign exchange activities occupy intermediate positions. The most demanding banking products, including project finance, derivative instruments and asset securitization would appear at the far right, in recognition of the special skills and information needed to engage in these activities.

17. The *Risk Frontier* identifies that level of information processing capability required to engage in an activity having a given level of sophistication without incurring an unreasonable level of risk. Where the informational requirements of a specific activity exceed the informational processing capabilities of the bank undertaking this activity, we can conclude that the bank will expose itself to unreasonable risk, since the outcome of this activity will be dependent on risk factors the bank is unable to analyze and achieve reasonable protection against. For these purposes, an “unreasonable risk” means, for any given activity, risk in excess of that level consistent with the long term *expected* profitability of that activity. The curvature of the risk frontier presumes that any bank needs a cumulatively greater information processing capability in order to engage in progressively more sophisticated banking activities.

18. The precise *shape* of the Risk Frontier can be a matter of debate and empirical verification. For the purposes of this initial articulation, the assumption is made that, in moving from the essentially passive role as the follower of government directions into lending on a commercial basis, a relatively significant increase in banking skills and information processing infrastructure is needed, resulting in a steeper slope of the Risk Frontier. As these initial skills are mastered, however, and the information processing infrastructure is put into place, the incremental sophistication needed to move further out on the continuum of product complexity is less, resulting in a lesser slope of the Risk Frontier in those regions.

19. The *location and position* of the Risk Frontier depends on a set of factors which, taken together, determine the quality of the operating environment for banks, which contributes to the overall “riskiness” of banking. The individual factors which comprise this environment are external to individual banks and so outside the banks’ direct control. They are, however, closely reflective of policy interventions urged on the government by the IMF, the World Bank and other advisors, designed to guide the economy’s passage through the transition. In general terms, these factors include the *legal infrastructure* (property rights, contract enforcement, central and commercial banking laws, collateral and banking laws), *macroeconomic conditions* (interest rate levels, stability of interest rates, exchanges rates and prices generally), *structural reform* (privatization, de-monopolization) and *reform in banking regulation* (prudential regulations, supervision, accounting). In addition, the quality of commercial relationships, or the degree of trust which has generally built up between commercial counterparts, is an important factor, particularly in the early transition, with the severe dislocation of traditional trade and business relationships which exists at that time.

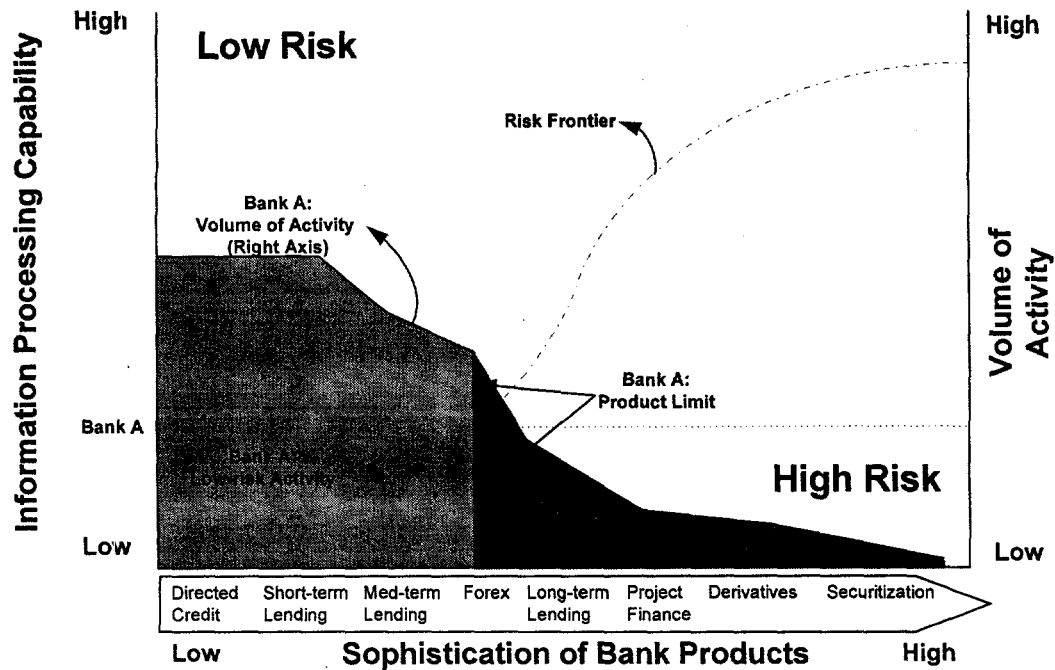
20. As with the shape of the Risk Frontier, the impact of a specific environmental factor on its location and position can be a matter of empirical verification. In general terms, however, for any given factor, where that factor operates to increase the risk of banking operations, it also increases the need for information processing, to control the risk. Thus, for example, high real interest rates, undeveloped business laws and significant privatization all contribute to

unpredictability in the condition of enterprise borrowers, which can only be controlled by the banks processing more information about those borrowers.²² In terms of our analysis, these factors all contribute to a higher position of the Risk Frontier, which has the effect of placing more banks into the high risk area, at least until their information processing capabilities increase. Similarly, a low real and stable interest rate regime, predictable and enforceable laws and government ownership of (and support for) enterprises, will all be reflected in less information processing needs and thus a lower position of the Risk Frontier.

21. The concepts introduced in broad terms in *Figure 1* can be applied to analyze individual banks as well as entire banking sectors. *Figure 2*, for example, presents the risk profile of a specific bank (Bank A), operating in a transition economy. The location of the Risk Frontier is again determined by economy-wide factors outside the control of Bank A. *Figure 2* also contains an indication, along the horizontal axis, of various specific products with increasing sophistication. The shaded regions (which are calibrated by reference to the right hand axis of the diagram) indicate the volume of each such product, as a proportion of the total business conducted by the bank. The point where Bank A's level of information processing capability - indicated by the horizontal line labeled "Bank A" - intersects with the Risk Frontier defines bank A's "product limit": that is, the maximum product sophistication Bank A can deliver, at that stage without incurring undue risk. To the extent Bank A elects nevertheless to deliver products beyond this limit, these products will entail "excessive" risk²³. The magnitude of this excessive risk is indicated by the area labeled "Bank A: High Risk Activity." This area is a combination of the number of Bank A's products which are beyond its information processing capabilities and the volume of such products. Overall, the relationship of this high risk area to the corresponding low risk area gives some indication of the overall risk profile of Bank A, in the given environment. Note, in this connection, that policy interventions which, as noted above, operate to shift the Risk Frontier upwards and to the left will also shift Bank A's product limit to the left, which will have the effect of increasing the volume of high risk activity and the overall riskiness of Bank A's operations.

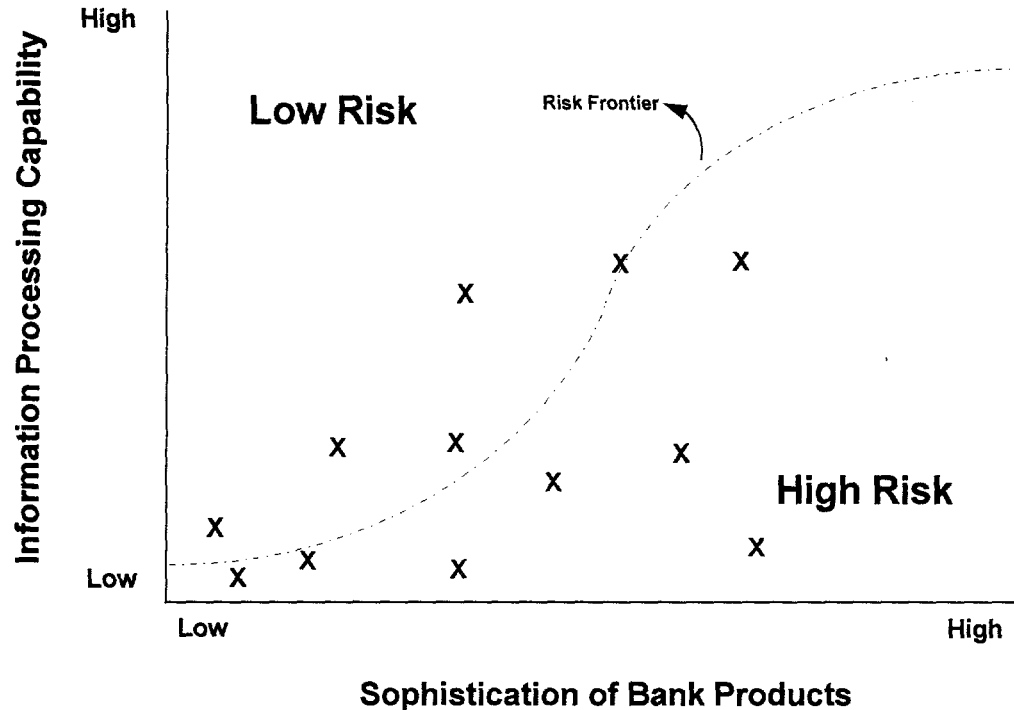
²² A recent and dramatic example has been the hike in interest rates in Russia and Ukraine in June 1998 to nominal levels of over 10% and real levels of 60% or more. Independently on any success that banks may have achieved in improving their risk management skills, these interest rate hikes have definitely exposed the Russian and Ukrainian banks to increased risks.

²³ This is a matter of degree rather than absolutes and the competence of Bank A must be assessed relatively to some norms of good practice. Thus in relation to the higher risk products, it is not that Bank A is completely incompetent to deliver them but merely that its level of information processing competence is weak relative to the norm.



22. Figure 3 applies this approach to the entire banking or financial sector of which Bank A is merely one part. Each "X" represents one bank; the location of each bank reflecting the bank's information processing capability and the weighted average sophistication of the bank's product mix, as indicated by analysis of the type shown in Figure 2. The overall riskiness of the sector depicted is a function of: (i) the number of banks in the "High Risk" zone, (ii) how far below the Risk Frontier each of those banks is, and (iii) the relative share of banking activity represented by those banks.

Figure 3: Banking Sector Risk Profile



23. The translation of the data for an individual bank in Figure 2 to Figure 3 is outlined as follows. Any bank having zero high risk activity as defined in Figure 2 is located above the risk frontier of Figure 3 at a position corresponding to its most sophisticated product. Any bank having high risk activity as defined in Figure 2 is located below the risk frontier of Figure 3. The *distance* below the frontier is a function of the high: low risk ratio as defined by the shaded areas in Figure 2. The location in the horizontal dimension depends on the most sophisticated product offered by that bank.

24. By way of summary we can note that, in principle at least, the diagram can locate any bank in a system in terms of (a) its own internal information and information processing capabilities; (b) the sophistication of the banking products it attempts to offer (both on the asset and the liability side of its balance-sheet); and (c) the external operating environment which contributes to the riskiness of particular banking activities/products. At any point in the transition, if banks are predominantly located above the prevailing risk frontier, we can assert that the banking system is "safe". But if the opposite applies then the system is "unsafe" in that most banks are not adequately insulated from the dangers arising from informational problems which can cause excessive risk-taking. Financial sector "transition" is a difficult concept precisely because it involves substantial and largely unpredictable changes in all THREE dimensions: the position of the risk frontier, the products offered, as well as the information capacities of banks.

25. But Figures 1-3 provide only a *static representation* of the situation of banks and the banking sector as a whole. To apply our framework of analysis to the transition, one further

dimension – time – must be accounted for, to reflect changes in the banking sector as the many elements of the transition unfold. Fortunately, these many elements can be represented in the three dimensions of change summarized in paragraph 24. During the transition, these three dimensions can be expected to evolve along the following lines.

1. The *Information Processing Capabilities* of individual banks should increase as banks build their human capital through education and training, build operating experience, hire new staff and establish joint ventures and other alliances with external partners from economies with more developed banking systems. This increase in capability will also involve the installation of computer and other operational systems to handle areas such as accounting, asset/liability management and credit analysis. Simultaneously, more information will become available to banks through developments such as enterprise accounting reform, the liberalization of prices, privatization and de-monopolization. As any individual bank implements these changes, its position on our diagram will move directly upwards on the vertical axis of our sector diagram. *Other things remaining equal*, this movement will tend to bring the bank from areas of higher risk into areas of lower risk.
2. As reform takes hold in the economy, a greater *variety of banking products* and services will be offered by banks to their customers. Developments such as universal banking, which, intentionally or not, is becoming the norm in most transition economies, will significantly increase this product range. Typically, as new products are added to a bank's portfolio, greater demands are placed on the bank to design and manage these new products in ways which adequately control their risk. This product widening effect, *other things remaining equal*, is reflected in our diagram by a move of the bank to the right on the horizontal axis, again into areas of higher risk.

26. The combined effects of factors 1 and 2, above, will, over time, tend to move a specific bank from the lower left corner of the diagram towards the upper right corner, with the speed and precise direction of this movement determined by the character of the business development and institutional development strategies adopted by the institution. The optimal approach, of course, for a bank seeking long-term success/survival in the sector²⁴ would be to combine these two strategies in such a way as to keep the bank above, but as close to the Risk Frontier as possible. Figure 4a depicts this movement over time for each individual bank in the diagram with an arrow, which reflects the combined effects of these two factors.

²⁴ This qualification reflects the common observation that many banks, particularly in the early stages of the transition, were established not to engage in traditional banking activity, but to serve either as the treasury function of their enterprise founders or to gain access to state subsidies distributed through the banking sector. In our diagram, such banks would tend to remain clustered in the lower left corner of the diagram, at least until advances in sector reform forces them either to liquidate or adopt a more conventional banking business strategy.

Figure 4a

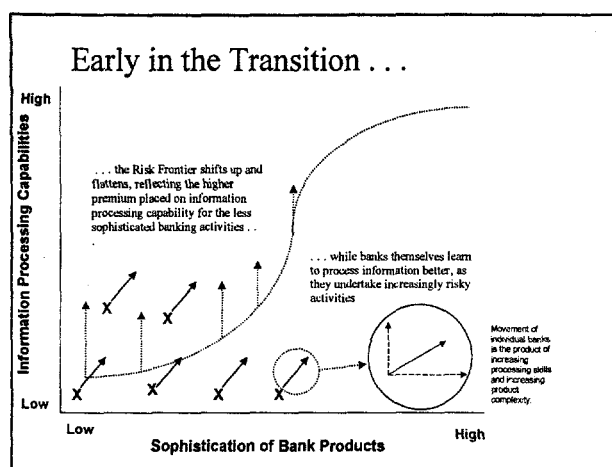
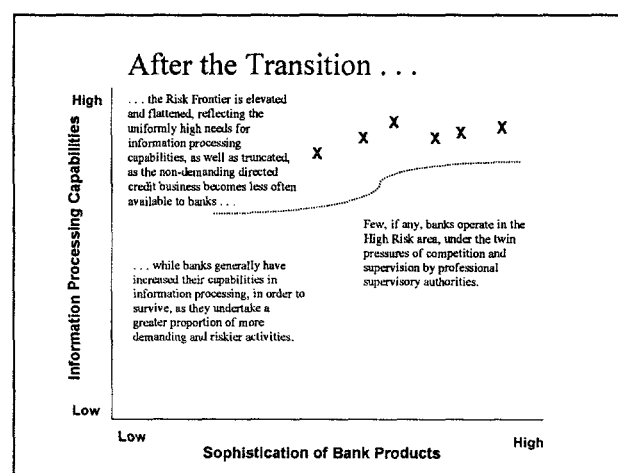


Figure 4b



27. The third dimension reflected in our diagrams, the *operating environment*, is indicated by the shape and position of the Risk Frontier, under the influence of factors such as those described in paragraphs 19-20, above. Although the overall long term impact of these various factors over time may tend to shift the Risk Frontier upwards while also flattening the slope of the curve, this evolution is by no means certain or monotonic. Most environmental factors associated with reform can have complex effects on the risks faced by banks. The *combined* effect of changes in several of these factors is likely at best to be unpredictable or even counter-intuitive. Thus, for example, the implementation of modern banking laws and prudential/supervisory regulations will initially raise the Risk Frontier by restricting the less information-intensive strategies, such as insider and connected lending, which, in the early transition, are the safer banking strategies (See Sections IV and V below for a fuller explanation). Similarly, the liberalization of prices, trade, etc. exposes banks to the need, formerly absent, to do a serious job of processing information in order to distinguish good from bad credit risks. Any parallel liberalization of credit gives banks the freedom, also formerly absent, to offer a greater variety of differentiated products. Thus both types of liberalization can be seen as exogenous sources of increased risk to banks. By contrast, the effective implementation of collateral and bankruptcy laws can lower the Risk Frontier, making banking generally safer, by substituting reliable legal relationships for borrower-specific business information.

28. In general, it may be said that, over the long term course of the transition, as an economy moves away from the inefficient yet predictable command structure into the efficient chaos of the market, the Risk Frontier rises and flattens, as greater information processing demands are placed on all banks. However, the short term perturbations around this longer term trend may be very considerable as individual components of reform change the environment in which banks need to work and so the risks to which they are exposed.

29. Figure 4b depicts our hypothetical banking system after it has emerged successfully from the, possibly long and probably turbulent, Transition, with a smaller number of banks now clustered in a smaller low risk area just above the Risk Frontier, which has shifted substantially

higher and to the left.²⁵ “Non-bank” banks, speculators and other businesses are no longer in the sector, the pressures of modern regulation and supervision and market competition have driven them out and selected as survivors the banks which were willing and able to build their information processing capabilities to the degree necessary to control the added risks of operating in a market environment with a differentiated product mix. However, there is neither inevitability nor smoothness about the transit from the situation depicted in Figure 4a to that shown in Figure 4b. The factors we have described could easily conspire to keep individual banks or even whole banking sectors in something like the “Early Transition” state depicted in Figure 4a. The fascination of the transition in the FSU even seven years after it all began, is that we still observe a great variety of country experiences covering most of the spectrum from 4a through to 4b.

30. Having presented a framework of analysis for better understanding the impact of specific actions and interventions on the banking system in transition, the next section seeks to apply this framework to generate several general propositions about banking in the transition environment

Section IV: Three Propositions about Banking in Transitional Economies

31. The framework as presented in Figures 1 - 4 is clearly a schematic which needs refinement if it is to have operational significance. But even at this rudimentary stage, we can apply the logic we have developed to explore some features of transitional banking and see that these might be such as to confound, possibly even invalidate, the advice coming from a more traditional basis of analysis. As we shall see in Section V many aspects of banking behavior in the transition are divergent from the familiar textbook approaches to risk management. These differences provide some justification for our assertion that *transition financial systems* need to be analyzed as something other than primitive versions of market based systems.

32. Let us illustrate this with three simple but important propositions suggested by the framework.

Transition banking systems do not need the full menu of Western-inspired institutional and infrastructure reforms to be “safe.”

33. The framework makes it clear that a transition banking system may be quite safe from many points of view²⁶ even though it has progressed only a small way through the menu of reforms which the Bank typically advises to client countries. This could happen because the majority of banks may *not* be trying to deliver products having any great informational sophistication - hence banks collectively are unlikely to make the mistakes which typically lead to systemic banking crises in mature market economies. Indeed, the framework suggests that such problems can *only* arise when banks attempt to deliver products which exceed the

²⁵ The leftward movement is explained by the gradual disappearance of the typical banking products of the central planning era which involve low risk and low information processing requirements: e.g. directed credits.

²⁶ This proposition again confronts the semantic problem referred to earlier. The explanation given in footnote 13 above is once again relevant.

sophistication of their own information capacities and for any given external environment. Alternatively, it could occur because the quality of general macro and other reforms is such as to leave the risk frontier at a relative low position.

Transition banking system “safety” may be disrupted by numerous factors having nothing to do with the quality of bank performance.

34. The framework also makes it clear that the safety of a transitional banking system is an elusive and potentially highly changeable concept. It can be either enhanced or diminished by reforms, or other environmental changes which are not directly related to the banking sector. For example the freeing of foreign exchange rates or interest rates is likely to shift the Risk Frontier upwards and push at least some, otherwise safe, banks into the high risk zone where their informational capabilities are lagging behind the needs of the new and possibly more turbulent environment. Above all there is nothing particularly concrete about the concept of a “good” bank. “Transition” is often presented as a discrete period of time through which transition economies will inevitably pass. Our framework suggests that this is a gross over-simplification. The process is in fact fraught with pitfalls (significant between-period pivoting of the risk frontier of our analytical figures) and there are a whole host of factors which can create dangers for a supposedly “safe” banking system even when it has progressed a long way down the road to transition. Bank “safety” is defined by a complex interaction between the informational capacities of a bank, its ambitions as regards the sophistication and riskiness of the products it offers, and the external environment in which it needs to operate.

Transition itself can damage the health of a banking system.

35. The third insight is that during the early stages of transition, banks are likely to face powerful incentives to move into increasingly sophisticated banking activities, *without* necessarily introducing the corresponding improvements in their information processing capabilities. This is because the declining interest margins and tight monetary controls that typically accompany inflation stabilization (a standard early component of reform), put pressures both on bank liquidity and on earnings. Premature product diversification offers attractive sources of temporary liquidity relief and prospective new sources of earnings. We have already seen many examples of this in the FSU -- both actual diversification and wholly unrealistic ideas for product diversification in many small inexperienced banks in the region. The risks associated with these new products (e.g. the promissory notes which created serious problems for Russian banks in 1996 or the recklessly generous deposit interest rates in Albania and Latvia) receive limited attention, *ex ante*, from inexperienced regulators, and their Western advisers, because of a lack of understanding of the risks. Equally new product opportunities may seem to confront poorly informed managers with new opportunities for profit (and personal enrichment, given weak regulation). Also, while objective information is poor, the desire to “keep up with the Joneses” may also motivate product diversification. In Bulgaria, for example, it is suggested that product diversification by the Sperbank was motivated by a desire to bolster lagging profitability and to ensure that the bank remained in the frame for possible privatization. But let us be clear that the stabilizing reforms which the IMF, the World Bank and other donors advocate are also an important part of the pressure for banks to move to the right along the horizontal axis without, necessarily, any movement along the vertical axis. The result is that significantly more banks

may locate themselves on the high risk side of the risk frontier. Other World Bank and EBRD products such as credit lines typically pressure banks to move in both the horizontal direction (i.e. more complex products), and the vertical direction (i.e. more effective information processing to address the extra risks). Hence their effect on safety system depends on the relative strengths of these two types of pressure.

36. In practical terms this suggests that external advisers might commit more time to advising countries about how to monitor and restrict banks from the premature moves into more sophisticated banking products. This could be a useful complement to our efforts to achieve an early and general adoption of Western standards of bank supervision, regulation etc. It would also require resistance, on the part of advisors, to the notion that more sophisticated financing products – such as long-term lending -- are needed early on in the transition, to anticipate the capital financing needs of the emerging private sector.

Part V: The Reality of Banking in Transitional Economies

37. In this Section we expand on these three main points by examining a sample of six aspects of banking and regulatory behavior and performance in transition economies through the lens of the analytical framework outlined above. The purpose is to show that these aspects of behavior, which might be regarded merely as cultural curiosities if analyzed in a traditional Western manner, turn out to be rather more rational when examined by reference to our proposed framework.

38. **Politics.** Political factors intrude far more prominently on banking in the FSU than in more mature systems. In the early stages of transition of the FSU, these factors overwhelm more traditional business and financial concerns in assessing the creditworthiness of state-owned enterprises -- a highly significant category of borrower for banks until privatization and related structural reforms are much further along. We need to recognize that this discourages the growth of essential credit analysis and risk assessment skills in general, but *encourages* the nurturing of closer bank relationships with the politicians and bureaucrats who control the fate of these enterprises. In practical terms, bankers find their points of safety in our diagram initially through these political relationships rather than by developing the technical credit monitoring and other information processing skills. Indeed these skills are likely to be regarded as an unnecessary luxury. Political influences on the application of sanctions by banking regulators also place a premium on the establishment of cozy but non-commercial relationships between bankers and politicians. The reluctance of politicians to apply sanctions against banks which are in trouble until the last possible moment is thereby intensified and, in its turn, encourages excessive risk-taking when banks first encounter financial difficulties and *unregulated* asset stripping when the insiders realize that a bank's continued viability is in jeopardy.

39. **Banking Infrastructure.** The quality of financial and other business information available from current and potential borrowers in a typical FSU country, in any case, is often insufficient for a reasonable creditworthiness analysis. This places a premium on personal and other relationships in the loan approval process. The large Financial Industrial Groups (FIGs) which are particularly powerful in Russia are merely the extreme example of this proposition.

The maturity mismatches associated with the typical FIG set-up is a spectacular example of the associated risks (e.g. very short term deposit and other liabilities contrasted with assets consisting of large holdings of unlisted shares in associated companies – shares which are highly illiquid in principle but also because of shareholder or employee resistance to their possible sale).²⁷

Widespread deficiencies in the legal infrastructure for banking, particularly in the laws governing collateral and bankruptcy, mean that the banker cannot reliably look to the courts to recover loan losses. The preference for insider arrangements may mean in reality that banks are likely to be located further to the lower right on Figure 1 relative to any given risk frontier. The deficiency of a reliable legal framework means that the risk frontier itself is located (pivoted) quite a long way to the upper left, thereby exposing more banks to substantially more risk than would otherwise arise. As a practical matter, the FSU banks have tried to compensate for these dangers by adopting risk management strategies based on direct control over a borrower's transaction balances.²⁸ While personal guarantees by shareholders and other collateral is often required by banks - more as a cosmetic measure than for their intrinsic value - it is control over the "jugular vein" of the borrower's own bank balance that creates leverage for the lender.²⁹ Unfortunately, this has the major downside effect of severely limiting competition among banks since it often precludes clients from holding accounts in more than one bank. In terms of IMF and World Bank policy advice it is difficult to see how the standard requirement for more competitive or contestable banking can be squared with the understandable desire of the transitional bankers to use controls such as this to defend their own financial soundness.

40. ***The Taxation of Banks.*** Official hostility to the notion of banking as a respectable business has been reflected in several FSU countries by the excessive taxation of bank profits, as well as in a generally hostile relationship between bankers and bureaucrats. This attitude prompts bankers to conceal profits and to collude with corrupt officials to move as much income as possible off the official books. Tax laws which unreasonably limit or even prohibit deductions for establishing loan loss provisions and write-offs effectively penalize sound accounting, encouraging banks to persist with the inaccurate classification of loans and the associated ever-greening of loans to distressed borrowers. Under this regime, bankers have little or no incentive to adopt internationally accepted accounting standards; modern portfolio and management information systems; or business methods to improve the monitoring of transactions between the head office and bank branches. In other words banks have an incentive not to advance too far along the vertical axis of Figure 1 even though the incentives to advance in the horizontal plane may be considerable. Many of the technical "improvements" which Western external advice presents as unambiguously desirable, are viewed by bankers as actions which serve primarily to make the results of their operations more transparent, thereby subjecting a greater proportion of their income to taxation, and other forms of bureaucratic attack.

²⁷ Similarly, much of the lending by the banks in a FIG group is more like an equity investment than a credit because of the willingness to accept the up-side gains but not to liquidate loans when they fail.

²⁸ By this we mean the right enjoyed by the banks (and often shared with tax inspectorates) to unilaterally debit the bank account of a client in the event that payments that are due are not in fact made. This is derivative from old Soviet practices where arbitrary expropriation of bank accounts was quite common.

²⁹ Even in Russia, where banking is thought to be fairly sophisticated, money in banks is still not freely convertible into cash and the tax administration still enforces the principle of one bank-one account on many taxpayers.

41. ***The Impact of the Lack of Financial Discipline on Competition.*** In many FSU countries, the real competitors of banks -- particularly for the business of state-owned enterprises -- are not other banks. They are state-owned energy suppliers, the tax collector, unpaid workers and other enterprises. It is to these informal sources of finance that many enterprises turn first.³⁰ They are preferred to banks because obtaining credit is simple, even automatic, much of the financing is pragmatically considered to be grants - expected to be forgiven in later structural reforms - and that part which is not a grant typically carries no interest burden. The attractiveness of informal borrowing is further enhanced, in the absence of interest payments, as inflation reduces the real purchasing power of the underlying liability. While these problems can be a concern in many countries, the special issue of the FSU is the very large magnitudes of these informal financing channels relative to the more formal channels, including banks.³¹ The large magnitudes and wide usage of informal credit severely undermines the competitive position of "serious" banks. It also contributes further to the degrading of customary methods of credit analysis and other traditional techniques of selecting borrowers, in favor of "relationship" banking where shareholdings (by borrowers) or other connections give bankers some edge in terms of information and customer access relative to their competitors. Bankers who select their borrowers in this way have little use for technical assistance in credit analysis and asset management: i.e., little incentive to move upwards on the vertical axis of Figure 1.

42. ***Banking Supervision.*** Substandard supervision, flowing from the weak content and limited enforceability of regulations, as well as from the qualifications, the resources and the uncertain political mandate of bank examiners, has contributed to a generally adversarial relationship between FSU bankers and their regulators. Western banking accepts the regulatory system as a necessary and even positive mechanism to reduce both individual and systemic risk for banks, and the independence of regulators is almost always a *sine qua non*. In the FSU, this culture of acceptance of regulation and supervisory independence is lacking and most bankers feel relatively little compunction in evading regulatory requirements. For their own part, FSU banking regulators have had trouble shedding the "command and control" mentality of the old Soviet system, which emphasized literal obedience to rules designed to cover all contingencies, in favor of market-based regulatory systems, which require the exercise of discretion and a basically cooperative relationship with banks.³² All these factors, combined with inadequate accounting, permit a ubiquitous evasion of prudential regulations, especially those limiting connected lending, loan concentration, excessively risky transactions and the payment of dividends without profits. In other words, even the better systems of bank supervision in the FSU have found it difficult to prevent the premature moves to riskier positions (the rightward moves along the horizontal axis of Figure 1). One result among others has been the rapid emergence of

³⁰ The existence of such forms of financing is not necessarily an indication of a poorly managed enterprise. The best managers would naturally be expected to mine these cost-effective sources of finance aggressively, as would less talented managers, who may simply be forced into a similar strategy through lack of revenue.

³¹ For example, at the end of 1996, inter-enterprise arrears in Ukraine amounted to more than Hr.70 billion (\$38 billion). This compared to total bank credit outstanding of only Hr. 11 billion (\$5 billion).

³² The general failure to require public disclosure of bank financial information, in which Estonia and Moldova are noteworthy and model exceptions, means that regulators cannot enlist in support of their efforts an important ally -- the public -- to identify and isolate poorly run and poorly performing institutions. The result has been a general loss of confidence in banks, even where there are examples of small, well-run institutions which merit the support of the public. Embracing public disclosure of this sort would also take some of the pressure away from the deposit insurance debate and help to de-politicize the process of banking supervision.

high-risk “pocket” and “zero” banks which are little more than the treasury operations of one or a few enterprises, yet which are, in some countries, still permitted to receive deposits from the public and participate in the national payments system and the inter-bank market.³³

43. ***Deposit Insurance and Moral Hazard.*** The difficult issue of deposit insurance continues to elude resolution across the FSU. Until economic recovery provides governments with some budgetary “breathing room,” it is hard to see how the inherent tension between the political desire to protect all household depositors and public resource limitations can be resolved. Until then, the situation is likely to be driven more by politics than by law. *De facto* deposit insurance for household deposits, at a minimum, is probably assumed by the public in most countries, official pronouncements to the contrary notwithstanding. Certainly, the state’s continued ownership interests in many FSU banks and its direct political involvement in many more, gives credence to this assumption. And the experiences with the three Baltic banking crises in the 1993-96 period confirms the political assumption that governments, in practice, have a hard time resisting broad-based depositor protection, in the absence of more limited laws.³⁴

44. For FSU and indeed bankers in other countries, the presence of *de facto* deposit insurance is significant partly for the familiar theoretical reason that it dilutes their concerns about the level of risk to which they are willing to expose depositors’ funds. But in addition, it creates a less direct, but equally troubling incentive. If there is a political imperative to protect depositors, there is a substantial likelihood that governments and central banks will bail out the larger troubled banks, or at least defer the decision to close and liquidate those banks as long as possible. This creates a strategy for bankers’ self-preservation in bidding up deposit rates in an effort to capture enough household deposits to make the bank “too big to fail” politically. A particularly egregious example of this strategy can be seen in the history of Latvia’s Bank Baltija, the central actor in that country’s recent banking crisis. With real deposit rates approaching 90% in 1993/94 an enormous percentage of the entire system’s deposits flowed to this bank and, as a result, the government was reluctant to take decisive action when the bank proved to be insolvent. This lost a valuable period of time, during which it appears that virtually all the bank’s assets disappeared.

45. The above list of “perversities” is not complete, nor can it be. It does, however, give some indication of the forces which devalue what we would see as “good” banking behavior and “good” banking skills, and place a premium on a wholly different set of skills which would ordinarily be irrelevant -- if not punishable -- in a more traditional, market-oriented banking system. *All these non-standard modes of behavior are amenable to interpretation in the light of the information-processing framework which we propose.* Once we begin to see things through this lens, we can also understand the problems that arise because the interventions supported by

³³ A number of countries have made important progress in limiting the licenses of existing banks, it should be noted, including Estonia, Latvia, Lithuania, Georgia and Uzbekistan. Where these pocket and zero banks can be isolated from household deposits, the inter bank market, the payments system and access to central bank credit, however, they can serve as a useful resource for enterprises, and even industrial groups, which require banking services to survive, yet represent excessively high credit risk for “ordinary” banks.

³⁴ Estonia and Moldova are the only examples in the FSU where a clear decision was made to allocate some of the losses in an insolvent bank to depositors, but even in Estonia, protection was provided to other depositors in other banks. In contrast, Latvia and Lithuania are examples of a quick, political decision to provide full protection, even where it was not legally required.

the IMF, the World Bank and other donors are sometimes contrary to the commercial interests of both the bankers, and their ultimate regulators - the government. This is in marked contrast with the West where legal and regulatory systems are broadly consistent with both private and public interests.³⁵ The examples also suggest that the balance between the *need* for informational processing skills (to manage and monitor risks), and the bankers' *command and use* of such skills, is likely to evolve extremely unevenly as economic transition itself proceeds. The technical assistance provided by the Western advisers needs to recognize this and to do far more than merely explain and try to inculcate "good" practice. It also needs to be sensitive to the pros and cons of the pre-existing "bad" practices of FSU bankers, and also of some possible dangers to banking stability of the premature abandonment of such practices. Perversely, we may need to temporarily defend some "undesirable" practices in the interests of defending system stability. In many cases, the reality of the FSU "market place" is that behavior which may be seen as prudent and low risk under traditional notions of banking in the West, may expose banks to even greater risks in the FSU environment. These drivers of behavior should be taken more fully into account in considering, for example, the restructuring of state-owned banks, as well as in the basic design of banking system regulation itself.

Section VI: Public Policy Support for Banking Sector Development

46. The analytical framework developed in this paper leads to several conclusions of relevance to the effective design and sequencing of support for financial sector development in the FSU. These conclusions are articulated for the moment mainly from a World Bank perspective. However, most of what is said has relevance also to the policy interventions supported by the IMF, the EBRD and other external agencies. Although conclusions about some policy interventions may be self evident and uncontroversial, our approach which focuses explicitly on the nature of the transition (rather than its beginning and ending points) nonetheless provides a fresh focus on particular policies. Hopefully this can be useful in fine-tuning well established approaches such as the use of credit lines. Other conclusions about other forms of policy intervention are more controversial and we would expect them to be the subject of robust debate to assess their validity.

47. The first and most important point revealed by the analysis is that *the reform of the financial sector of any FSU country certainly has to be regarded as a long-term project*. The cultural, attitudinal and incentive factors which constitute the main differences between Western and Soviet banking are not amenable to quick fixes. Additionally, the three main influences on the structure and safety of a sector (bank informational capacities; the sophistication of the banking products being offered; and the external environment which conditions the location of the risk frontier), will all change significantly but, in some cases slowly, as transition proceeds. This complicates any attempt to assess the health of the system at any stage or to locate it on some linear time chart of progress towards reform. Furthermore, the nature and pace of change is hard to predict; it is also partly endogenous depending on the stance of policy; and, in the case of the third of the influences listed above, the changes will inconveniently go in different directions at different stages of the transition: sometimes helping to strengthen banks and at other

³⁵ It bears noting that this long list of obstacles does not mean there are no good bankers in the FSU. Plainly there are, and they can be found in every country. Yet it must also be conceded that they can be found relatively easily because they stand out so far from the average.

times damaging their safety. So apparent “successes” in the short term are almost certain to be followed by some subsequent reversals. The message for the World Bank is that it should dig in and provide assistance to the sectoral reform project on a *long-term* basis (Caprio and Klingebiel arguing from another perspective suggest at least 10 years).

48. We should also not be surprised by *uneven progress during that period*. We need to build a deep understanding of what is actually happening - with bank incentives, clients performance, the political-banking nexus etc. - and how we can best nudge the system slowly in the right direction. We also need to use our analytical skills to *anticipate* and be ready to ride with the reversals which are an inevitable part of the transition process. This is the World Bank’s main comparative advantage in working on the sector. Other donors, by contrast, will be looking for partial involvement and may want to assess the success of their assistance against relatively narrow criteria and on a short time frame. The Bank is the one international institution that *might* be able to take the longer term and more strategic view that the reform process definitely calls for. To the extent that it can do so, it will also win a disproportionate voice in the policy debate and possibly earn the right to help coordinate and sequence the inputs provided by other donors.

49. A related point is that the infrastructural reforms (improved banking supervision, collateral reform, IAS accounting etc) which we typically and rightly advocate, have long gestation periods. But, more important than the delays is the fact that the effectiveness of these reforms is only as good as the underlying culture and incentives of the system allow them to be. The reason is that the establishment of the new systems cannot of itself make for stronger banks. It is the *enforcement* of good systems on the banks that achieves this. But enforcement will not happen if the incentives and culture of banks and regulators are inimical to the necessary actions. This has several implications for the work of the World Bank. One is that we should not expect too much from the new institutions we help to create, at least in the short term. We should certainly not assume that, from day one, these will share the cultural attitudes which we bring from our own mature market economies - these have to be built slowly and founded on a significant consensus of public and political support before the necessary enforcement will actually happen.³⁶ A second implication is that we can help to shape incentives if we package the reforms we propose appropriately. A good example, relates to the early reform of the taxation system for banks, including a generous treatment of loan-loss provisions as a critical incentive to get banks to produce more realistic accounts.³⁷

³⁶ An analogy which may make this point clearer is with attitudes to corruption in different countries. In the USA and most other Western countries, there is a huge public intolerance of corruption by public officials and a broad consensus that even minor infringements of codes of behavior should attract severe punishment as well as various degrees of public humiliation. In the FSU, by contrast, the culture for the moment is one of passive tolerance of even huge corruption with public revelations of malpractice causing little apparent inconvenience to those who stand accused. As a consequence the unfortunate officials charged with detecting and prosecuting corrupt officials can rely on almost no consensus of public support for their actions, and little help from politicians. Even leading edge anti-corruption laws in this environment would do little good. Vide leading-edge laws on the regulation of banks.

³⁷ It is conceded that this is a controversial point. Good bankers assert that full provisioning should be done for reasons of sound risk management and not because it is seen to have tax advantages. Tax specialists argue that if unrealized capital gains are not taxed than unrealized capital losses should not receive tax exemptions. There is no elegant response to these arguments – only the pragmatic point that transition bankers have shown an aversion to full provisioning and they may need a bribe in the form of a tax break to get them to accept the idea.

50. A particular aspect of the long lead time needed for new institutions to become effective relates to the restructuring of problem banks. Embryonic systems of bank regulation, and inexperienced regulators are not particularly effective in implementing complex systems of bank rehabilitation and restructuring. While it is common for World Bank evaluations of financial sectors in the FSU to conclude that one or more banks need fundamental restructuring, our analysis suggests that the concept of a *discrete* once-for-all restructuring of any bank may be misplaced. This concept suggests that the standard inventory of restructuring techniques, including management changes, bank re-capitalization etc., can be brought to bear on a bank and can improve its performance in some reasonably predictable manner and in a short period of time. But this ignores two critical features of the real transition. First, the reality, as we have tried to explain it, is that transition banks are exposed to a variety of ever-changing internal and external forces which place them in a situation approaching continuous restructuring. The idea that this process can somehow be collapsed into a shorter period ignores the fact that no discrete restructuring program -- however well designed -- can change the fundamental nature of the client base of the bank; the prevailing cultural mores within the bank; the incentive system which motivates established (and probably replacement) managers and shareholders. Second, the idea of a discrete restructuring program ignores the reality that real people (bank supervisors supported by politicians) are needed to make many difficult and probably dangerous (to them) decisions to actually implement the program. But in the context of a low skill base, inexperienced staff and, above all, a limited consensus of public and political support for enforcement measures, this delivery capacity is likely to be weak or non-existent even if skilled advisory teams from abroad are recruited to help. So the message for the World Bank is that it should be appropriately cautious about any "bank restructuring" products which it may try to offer clients - their effectiveness in reality is likely to be very limited.^{38 39}

51. The experience of major banking crisis in Mexico in late-1994 and the more recent crises in Thailand, Indonesia and South Korea in 1997, indicate that the World Bank is likely to have a major ongoing role in helping to head off and deal with banking crises in client countries. The analysis of this paper provides useful insights about the circumstances which may cause crisis to emerge in transition economies. Two can be cited by way of example. First, the assessment of bank safety as summarized in Figures 1 to 3 makes it very clear that the *position* of the risk frontier is one critical element in determining whether a banking system is "safe" or "unsafe". Further, the main factors which can cause significant between period movements in the frontier (as opposed to long term gradual movements) are the *macroeconomic* factors as listed in paragraph 19 above). Hence our analysis is firmly rooted in the proposition that the *trigger* for a banking crisis is just as likely to come from such factors, and especially macroeconomic causes, than from problems in one or more specific bank. This is particularly important in the light of our

³⁸ This echoes the conclusion from the Pohl, Anderson, and Djankov paper cited earlier. The authors contend that bank re-capitalization can best wait both because the true extent of the bad loans of a bank are difficult to determine while enterprise restructuring is still ongoing, and because additional capital in a restructured bank may well result in additional bad loans since all lending decisions will continue to be made in an unpredictable and volatile environment.

³⁹ Even in the more celebrated of the Bank's involvement with bank restructuring, this caution has been shown to be justified. See for example, F. Montes-Negret and L. Papi, *The Polish Experience with Bank and Enterprise Restructuring*, Policy, Policy Research Working Paper 1705, January 1997. This notes that re-capitalization in Polish banks worked quite well because it was undertaken when other pre-requisites to sustain responsible bank behavior, including a modern bank supervision function, were in place (p.23).

earlier reservations about the potency of bank-specific interventions. It suggests that the World Bank, in tooling up to address possible banking crises in the transition economies has to ensure that it is well equipped with analysis and people to understand the macroeconomic influences on bank performance, and not just the behavior of banks.⁴⁰

52. Second, the paper has hypothesized that a variety of factors in transition can encourage some banks to push for expansion and new products before they have the skills to manage these safely. This tendency too is partly dependent on decisions/policies made outside banks. For example, in Krugmann's explanation of the East Asian banking crises in terms of Panglossian modes of financial behavior, it is the presence of implicit government guarantees of banks which creates the conditions for banks to over extend themselves. Such developments ought to be perfectly capable of early detection, monitoring and correction in countries where we have an active involvement and good working relations with bank regulators. It could be an important World Bank role to help develop such monitoring capabilities in our clients.

53. A further conclusion which emerges clearly from our analysis is that credit lines are definitely a double-edged sword in terms of their ability to strengthen a banking system and improve its safety. One thing we know for sure is that World Bank, EBRD, or any other credit line definitely enables the participating banks to get bigger and to move into more difficult and more risky products (i.e. to move along the horizontal axis of Figure 2). We have some examples of FSU banks with no experience of loans with more than a maximum maturity of 6-9 months, moving almost directly into investment credits denominated in a foreign currency and with maturities of 4-6 years. This definitely requires these banks to assume greater risks. In some cases, too, the scale of the credit line available is very large in relation to the capital of the banks. Less clear but certainly true in some cases, is that the achievement of eligibility for World Bank credit lines acts as an implicit public ratification of a bank's quality and results in its ability to attract deposits and other resources which would otherwise be less readily available. These resources also create the possibility for the banks concerned to grow larger and probably to move into new and riskier areas of activity.

54. To the extent that the implementation of the credit line also involves a serious and in-depth institutional strengthening program in the banks which achieve eligibility, their increased access to loanable resources can be a wholly positive development. In these cases the horizontal movements in Figure 2 are matched by appropriate moves along the vertical axis to improved levels of information processing which keep the risks to banks within reasonable bounds. But it is very clear from our analysis that credit lines which fail, or are overly casual, in this dimension of institutional development will do more harm than good to the banking system because they will encourage *premature* moves of banks into riskier products. Again this finding suggests a potential source of a comparative advantage for the World Bank. Other agencies such as EBRD,

⁴⁰ The Mishkin paper cited earlier is particularly useful in showing what factors to look for and which solutions may work. Especially important is his observation that the standard Western approach to dealing with banking problems namely monetary expansion, is unlikely to work in developing (and *pari passu* in transition) economies. This is because monetary expansion in these countries is likely to result in exchange rate depreciation and numerous negative follow-on consequences for banks including higher interest rates, deteriorated balance sheets of borrowers, and reduced net worth for banks themselves to the extent that they too have borrowed in foreign currencies. Instead, quick recovery is likely to require the injection of funds from *foreign* sources (as was the case in both the Mexican and the Thai crises). Such injections avoid the negative consequences for banks of a domestic monetary expansion.

the Eurasia foundation etc. are under pressure to move money fast and are less likely to be judged on the developmental impact of their activities. The World Bank, by contrast, can and should devote time to ensure that the necessary improvements in the credit and other management capacities of qualifying banks are achieved *before* they are allowed to channel significant volumes of credit. Possible criticisms from our client countries about our long processing times ought to be readily countered in terms of the need to match new product development in banks with the skills and capacities to deliver these safely.

55. A related point deriving from the analysis of the paper is that capital adequacy is an extremely poor basis for screening banks for eligibility for our credit lines. All of the doubts about the practical usefulness of this concept as developed in Annex 1 to this paper, contribute to this conclusion. But in addition, it is evident that World Bank and other credit lines are often large enough to significantly change the size as well as the nature of the risks to which participating banks are exposed. The practice of allowing banks access to credit lines on the basis of capital adequacy levels far *below* the Basle recommended minimum of 8 percent is also difficult to justify - unless additional measures are also taken in these cases to mitigate the additional risks. There are also serious problems in the early stages of transition in assigning to bank supervision departments the full responsibility for monitoring ongoing bank compliance with eligibility conditions. These problems relate directly to the incentive and skill/capacity problems analyzed in some depth in Section V of this paper. The implication here is that we need to re-open the discussion about the appropriate conditions which need to be met before banks are given access to World Bank credit lines. The conditions need to be calibrated much more around the real and changing risks encountered by transition banks.

56. On a more constructive note, the paper has suggested that there are specific but less conventional approaches whereby transition banks can be regulated and kept reasonably safe. These approaches map directly to our analytical framework and involve an ongoing compatibility test between the products being offered by each bank and its information processing and other management capabilities. We would argue (see also Annex 1) that this is a less skill-intensive approach to regulation and supervision and one which can provide benefits even in advance of the long gestating institutional reforms (e.g IAS accounting) which underpin Western systems of bank supervision and regulation. These approaches would seem to justify more attention and analysis from World Bank specialists as possible early stage complements to our more conventional forms of advice.

57. The last conclusion is that we need to be guarded in our own innovations. It is easy enough to find gaps in the financial product ranges available in most FSU and other transition economies - housing finance, pensions, primary and secondary markets for corporate securities, special loan facilities for small businesses and farmers etc. As we come up with World Bank products to help close some of these gaps it is a natural tendency to search for existing financial institutions that can be the sponsor for one or more of the necessary new products. But as our analysis makes clear, the risk characteristics of any new product needs to be assessed very carefully against the informational processing capacities of the institutions which are asked to play a role. To the extent that those capacities are inadequate for reasonably safe delivery of the new product, it is incumbent upon us to devote the resources needed to build the capacity - preferably before the new products are put into service.

**ANALYZING FINANCIAL SECTOR TRANSITION:
With Special Reference to the Former Soviet Union**

Annexes

IMPLICATIONS FOR BANK SUPERVISION

1. This Annex considers the usefulness of conventional regulatory and supervisory approaches in dealing with the turmoil and uncertainty confronting banks in the transition economies. In particular it asks (a) whether these approaches are *conceptually* appropriate for the special circumstances of the transition and, equally important, (b) whether the gestation time needed to implement such approaches is sufficiently short to give them any real influence on the situation, at least in the early years of the transition. If the answer to either of these questions is in the negative, we need to re-examine the conceptual foundations of bank regulation and supervision to define some alternative approaches to foster the safety of transition banking systems.

A. Capital Adequacy

2. The incomplete knowledge which makes banking risky cannot be eliminated fully even in the most sophisticated system. Indeed, as we have seen, sophistication may increase risk in some cases. The traditional asymmetric information literature suggests however, that well-functioning banks are better at limiting the risks than other types of intermediary. This insight fits uncomfortably with the accepted view of bank regulators that risks in banks should be controlled by imposing a risk-weighted capital adequacy ratios (e.g., at least eight percent as in the Basle Committee recommendations). The capital requirement and the associated guidelines flow from an analytical approach which is essentially probabilistic in nature (e.g., in repeated observations of banks with an “acceptable” risk profile, no more than \$1.00 of every \$12.50 of loans will be lost, implying that a capital cushion of eight percent gives reasonable security). Moreover, they take almost no account of the practical realities of transition as discussed in the body of the paper. Above all, the probability measures which underlie traditional capital guidelines are assumed to be reasonably stable, both across time and in different economies.

3. By contrast, the “uncertainty” reflected in our proposed analytical framework is not readily reduced to a probabilistic calculus -- “risk” is the wrong term -- and certainly not to one which manifests stability across time and space. As Figures 1 and 2 in the body of the paper illustrate, banks in a transition economy need to deal with turbulence in their operating environment as well as evolving changes in their own information processing capabilities. These can cause major changes across the transition, and at any point within it, in the cushion of capital that banks require to be “safe.” Hence the pragmatic suggestion that banks in transition economies should hold substantially more capital relative to assets than banks elsewhere, is

¹ The authors are indebted to Silke Reinig for intensive and effective research assistance with both Annexes.

understandable. However, it needs to be far better founded in some analytical framework which can tell us *how much more is enough*, before it is really useful.²

4 This is not to reject entirely the case for capital adequacy rules.³ The question is whether and to what extent capital adequacy can serve as the central risk control device for banks in transition, as it does for banks in other circumstances. The early indications are that capital adequacy regulations provide an uncertain and unpredictable protection, at best, for transition banks. The intensive application of the Basle principles is unlikely to mitigate the dangers to banks and depositors highlighted by our earlier discussion. Capital, above all, is not an effective substitute for the information-processing capabilities of banks as reflected in our Figures.

5. **The Conceptual Basis of Capital Adequacy.** At first glance, the Basle risk weightings summarized in Box A1 do map closely to the risk exposures of banks which are suggested by the analysis based on asymmetric information as represented in Figures 1 and 2. In the very early stages of transition, most bank assets will be “safe” assets with low risk-weight, including large cash holdings, balances with the central bank (including probably large required reserves) and, most important, loans to state-owned enterprises which are still highly integrated into the budgetary system. Hence, the banking system (but not necessarily the fiscal probity of the economy) is quite safe and the amount of financial capital needed in banks to defend that safety can be argued to be quite low. Gradually, as more state-owned enterprises are privatized, as the state withdraws financial support from other enterprises (voluntarily or involuntarily) and as formal reserve requirements are lowered, a greater part of total bank assets will fall into the higher risk classes and the amount of financial capital required for safety will rise. In other words, both the risk frontier in Figures 1 and 2 and the capital required for “safe” operation rise as the transition proceeds.

² For example, A Steinherr and D. Gros, Chapter 9 of *Winds of Change: Economic Transition in Central and Eastern Europe*, Longman, 1995.

³ The arguments in favor are well rehearsed. The more capital a bank has, the more able it will be to overcome external shocks and to absorb losses. Adequate capital can also exert a crucial influence on the internal incentives for prudent behavior by banks and their efficient governance. A high capital level increases shareholder's incentives to control the bank management and to limit the risks of investments. By contrast, banks with low or negative capital are more likely to take on highly risky investment. Their owners have nothing to lose. For example, with the recommended Basle minimum of 8 percent capital adequacy, 8 units of capital can be leveraged to produce 100 units of bank assets if all the assets in question are in the 100% risk-weight class as in Annex Table A1. However, the same 8 units of capital can be leveraged up to produce 500 units of bank assets if all the assets in question are in the 20% risk-weight class, and an almost infinitely large bank if all its assets are classified as riskless.

Box 1A: Risk Weights for On-balance Sheet Assets	
Weight (%)	Asset Category
0 %	<ul style="list-style-type: none"> • Cash • Balances at and claims on domestic central bank • Loans to domestic central Government • Securities issued by domestic central Government • Assets totally collateralised by cash or domestic central Government securities or fully guaranteed by domestic central Government
20%	<ul style="list-style-type: none"> • Claims on domestic and foreign banks with an original maturity of under one year • Claims on domestic banks with an original maturity of one year or and over and loans guaranteed by domestic banks • Claims on foreign central governments in local currency financed by local currency liabilities • Cash items in the process of collection
50%	<ul style="list-style-type: none"> • Loans to owner-occupiers for residential house purchase fully secured by mortgage
100%	<ul style="list-style-type: none"> • Claims on the private sector • Cross-border claims on foreign banks with an original maturity of more than one year • Claims on foreign central Governments • Claims on commercial companies owned by the public sector • Premises, plant, equipment and other fixed assets • Real estate and other investments (including non-consolidated investment in other companies) • Capital instruments issued by other banks • all other assets

6. However, closer inspection suggests that in practice the mapping from the actual uncertainties faced by banks in transition to Basle capital requirements is extremely imprecise. There are numerous problems with the Basle Committee recommendations when applied to a typical transition economy. For example, there is always an ambiguity over which bank loans to state-owned enterprises can really be categorized as having government guarantees (risk class = 0%) and which are loans to “commercial companies owned by the public sector” (risk class = 100%). And, even assuming an accurate initial classification, in the transition, a loan can migrate from one category to another quickly and unpredictably, as a result of political and economic developments. Should banks be allowed the infinite leverage of their own capital which the zero percent risk-weight suggests or merely the 12.5

times leverage suggested by the 100% risk weight?⁴ In any event, does even a 12.5 times leverage really do much to protect depositors in those transition economies populated by extremely sick state-owned enterprises? In addition, for most transition economies, it would be a fundamental error to classify bank loans to other banks in the moderate (20%) risk class although some set of inter-bank loans might sensibly be classified in this way.⁵ The classification of all loans to the private sector as equally risky is also suspect in light of the uncertain environment for private business, as well, for example, as the fundamental differences between private start-ups and privatized enterprises. In general, even if one were able to fully and precisely implement the Basle recommendations for most transition economies, one would have little confidence that banks which met the recommended minimum were particularly “safe.” And yet this is precisely what is done in almost all Bank-supported credit lines where a Basle-type level of capital adequacy is the first of the eligibility criteria which participating banks need to meet.

7. **Practical Problems with Balance Sheet-based Regulation.** The problems of applying Basle guidelines to the transition economy banking sectors involve far more than the “correct” size of the capital adequacy ratio or the correct risk weightings. On the *assets* side of the ratio, the valuation of bank assets is subject to a series of intractable difficulties, including the highly unpredictable fortunes of enterprises, excessively volatile taxation regimes characterized by the retroactive application of changes, shallow asset markets and unclear property rights, as well as the ongoing privatization programs. State-owned enterprise profitability is largely dependent on unpredictable political decisions, including the allocation of subsidies and the decision of whether, how and when to privatize.⁶ And political as well as financial disincentives to recognizing loan losses provides a powerful inducement to avoid the proper characterization of bad and questionable loans.

8. Irreducible uncertainty applicable to the *capital* component of this key ratio is no less troublesome. Large loans to insiders, (at times used to finance the purchase of shares as, for example, in the Russian FIGs), combined with inappropriate accounting procedures, leading to unjustified dividend payments, raise serious additional questions about the utility of capital as a cushion for loan losses. Even where capital is properly accounted for, excessive insider loans and violations of the large exposure

⁴ Steinherr and Gros suggest amending the measurement of capital and of risk-weighted assets to raise the risk weight for long-term claims on banks (from 20% to 100%), for claims on the domestic central government (from 0% to 20%) and for long-term claims on the corporate sector (from 100% to 150%)

⁵ Banks in both Russia and Ukraine learnt from mini banking crises in 1995 that inter-bank lending in an environment of poor quality information was extremely risky. Hence in both countries there were major losses in the inter-bank market and a subsequent significant decline in its size and importance.

⁶ It should be noted, in this regard, that the European Bank for Reconstruction and Development’s 1996 Transition Report estimates that more than 50% of the medium- and large-scale enterprises in the FSU have not yet been privatized. And this figure does not reflect the substantial residual interests retained by governments in many “privatized” enterprises, an interest which raises the specter of continued political interference in these enterprises’ operational decisions, and thus their profitability. See generally EBRD, *Transition Report 1996 -- Infrastructure and Savings* (1996), page 11.

limits, raise the question of whether any capital asset ratio short of 100% (or possibly even more) could provide a prudent level of protection for depositors.

9. There are at least three further elements underlying this implied criticism of the Basle approach. First, the 1988 Basle Accord only recognizes *credit* risk, which is easier to assess probabilistically.⁷ However, the huge turbulence experienced in the past six to eight years in most transition economies, is much more a function of market risk and other risk components (falling real output, unstable exchange rates, high variability of key certain input prices; major changes in access to major markets etc.). As our framework indicates, any of these shifts can easily cause a shift in the location of the Risk Frontier, with its consequent redefinition of an erstwhile “safe” bank into a substantially “unsafe” one or vice-versa. This has led some commentators to question not only the adequacy of the eight percent target for capital adequacy⁸ but also the concept itself.⁹

10. Second, even the assessment of the magnitudes of credit risk in the Basle recommendations, and the risk weights derived from these, relate to the statistical probability of loss. They fail to factor in the competence and motivation of the managers and shareholders of banks. Hence a 12.5: 1 leverage of capital may establish a reasonable statistical probability of the safety of depositors funds in well-established banks which enjoy competent, honest and well-trained management. It has little scientific prospect of defending the interests of depositors in an incompetently managed, and possibly dishonest start-up bank where the motivations of both shareholders and managers are also questionable - and most of the time we know little or nothing about the competence or honesty of our client country bankers.

11. Third, and most important, the evidence available suggests that early and mid-stage transition economies especially in the FSU are unlikely to be able to measure capital or assets adequately and enforce anything like the type of control envisaged in Basle. This has several aspects.

- The Basle concepts are generally poorly understood both in terms of the principles underlying the requirements/language; the measurement and calculation methods; and the accounting and IT system needed in banks to apply them properly.

⁷ The 1996 amendment to the accord began to correct this.

⁸ For example, A Steinherr and D. Gros in Chapter 9 of *Winds of Change: Economic Transition in Central and Eastern Europe*, Longman, 1995. These authors criticize the application BIS capital adequacy standards in transition economies for ignoring the importance of risk diversification; for not placing enough weight on the maturity of claims; for underestimating the riskiness of claims on other financial institutions; and for discriminating against privatization by ascribing low risk to loans to the government and creating incentives for increased lending to the government. They suggest amending the measurement of capital and of risk-weighted assets to raise the risk weight for long-term claims on banks (from 20% to 100%), for claims on the domestic central government (from 0% to 20%) and for long-term claims on the corporate sector (from 100% to 150%)

⁹ Most recently Gerard Caprio in a Comment in S.K. Bery and V.F. Garcia (editors), *Preventing Banking Sector Distress and Crises in Latin America*, World Bank Discussion Paper No. 360.

- Rules on disclosure of non-performing loans are typically very slow to appear in the transition economies and take even longer to be enforced fully. Even when this occurs, financial information on firms is typically insufficient to achieve a reliable classification of loans.
- Even if some banks do achieve the internal accounting and other systems necessary to implement the required measurement and classification, the competence of supervisory bodies to check compliance is also very slow to develop in many transition economies.

12. We can illustrate these difficulties with the Basle concept by reference to the issue of IAS accounting. It would be generally agreed that the introduction of full IAS is a *necessary* (but not sufficient) condition for the successful application and enforcement of Basle principals. But some eight years after the transition process started, only a handful of FSU countries (the Baltics and Kazakhstan in particular) have achieved new accounting systems based on IAS, and enforced through regular IAS audits in most banks. In most FSU countries including the largest countries -- Russia and Ukraine -- progress in this direction is confined to a limited minority of banks with generally weak enforcement through banking supervision.

13. The conclusion from this analysis is that we should certainly not reject the idea that some variant of a capital adequacy rule can be a useful ultimate target for regulatory policy in transition economies. However, the extensive work of the Basle Committee in defining the riskiness of different types of bank products does not seem particularly robust for the very special circumstances of transition economies. Many of the peculiar circumstances and incentives which we have analyzed earlier, are captured only poorly if at all by the capital adequacy conventions. Hence, it may be unrealistic to expect that this regulatory tool can be of much assistance in reality during the first part of the transition (perhaps ten years or more) in most transition economies. During that period we need to advocate strongly the adequate capitalization of banks but also to look to other, and probably less conventional, approaches to analyze and defend the stability of the financial system.

B. The Regulation and Supervision of Banks

14. A comprehensive system of banking regulation and supervision is a cornerstone supporting a sound banking system and the development of such a system is an integral part of the public policy reforms that the Bank needs to support. Whether banks are well or badly motivated, internally efficient or inefficient, an official regulatory oversight of them provides a second level of defense to protect the interests of depositors and limit the dangers of systemic damage. This is especially true when any form of bank restructuring is also advocated as an element of reforms. Unless controls can be put into place to limit the impact of moral hazard, adverse

selection and political influences on lending and other operational decisions by restructured banks, potential gains will be lost in another flood of bad loans.

15. But again the *timing* of this part of reform is the real issue and one which is rarely faced up to. In practice, improved bank supervision is normally given high priority as an early stage reform. However, our earlier comments have already questioned whether improvements in this area can realistically be expected during the early years of transition. In reality, many years are likely to be needed to overcome all the impediments in skills, culture etc. referred to in the main paper. Experience so far suggests that, for most countries, it is not realistic to expect the creation of really effective regulatory and supervisory monitoring of banks as an *early* stage reform. As a recent IMF report for the regular Basle Committee meetings notes, in 11 of the 15 FSU countries, moderate or substantial progress has been made in improving the quality of banking supervision. But the IMF paper also notes that these gains will all remain at risk if improvements are not realized in data quality, accounting, loan quality assessment skills, financial analysis and inspection techniques, as well as in the qualitative assessments of bank governance, management and staff.

16. The World Bank's own experience with individual banks, as well as with their customers, underlines these conclusions and concerns. Across the FSU, fundamental deficiencies in the basic business environment, and the behavioral patterns of banks, raise the question of whether, in the early stages of the transition, the traditional approach to banking regulation may have to be adjusted, at least temporarily, to accommodate to the reality of the situation. Several observations, common to the FSU experience, lead to this conclusion. They include:

17. ***The Legal Infrastructure.*** While great progress has been made in the introduction of modern legislation directly regulating central bank and commercial bank activities in the FSU, many problems remain with the actual *enforcement* of the new rules of the game. In addition, in most FSU countries, improvements are needed in the legal environment which has an indirect impact on banks. The collateral and bankruptcy laws, in particular, are virtually unusable in most FSU countries, either because they have not yet been adjusted to support market economies, or, more seriously, because the institutions needed to implement these laws - attorneys, judges, courts, operational manuals and procedures, registries and the like, are deficient, if not absent entirely. The creation of an enforceable legal infrastructure for lending raises the Risk Frontier significantly, which makes bank activities less risky and sets the foundation for banks moving into more sophisticated and riskier activities.

18. This web of deficiencies in the legal infrastructure creates a situation where collateral remains a poor risk management device - although the Bank routinely promotes its greater use in lending decisions and loan valuations.¹⁰ Typically, to be

¹⁰ For example in the loan loss provisioning regulations which the Bank frequently helps to draft.

useful, collateral must be brought under the physical control of the lending bank with its realization remaining a matter sanctioned by law. Often, the enforcement of loan contracts is entrusted to private forces -- again a questionable legal state of affairs -- or bank lending is limited to previously well-known customers who may be linked to the bank. This latter approach can be seen as an effort by individual banks to reduce the risks inherent in their business -- replacing the missing infrastructure with self-help. "Good" bank supervision should try to put an end to such practices, but in the FSU this may undermine the few risk mitigating devices available to early stage transition banks.

19. ***Universal Banking and Cross-Ownership Concerns.*** Most, if not all, of the FSU countries have a *de facto* universal banking system in place, under which banks are free to move a considerable distance along the dimension of sophistication in their product mix. However, because there has been no organized debate and positive legislative action to embrace this banking structure, the means to regulate non-core banking business, and to integrate the risk management systems of different types of activity, is lacking, which places these banks firmly in the High Risk realm. The discussion about consolidated supervision is only now beginning. These situations present substantial challenges in the consolidation, assessment and supervision of risks undertaken by banks. In most, if not all FSU countries, there is not even the beginning of an effort to deal with these complex matters. In these and other cases, one must ask whether we are asking too much of inexperienced, under-resourced regulators.

20. ***Human Capital.*** The foundation of skills needed for a modern bank regulatory system is another source of concern in the FSU. The systems being put in place in the FSU countries rely heavily on the ability of key individuals to produce, report and analyze financial data in ways that are largely alien to the historical experience of these very individuals. Some progress has been made, and the efforts of both the World Bank and the IMF are heavily invested in making up this skills gap. But there is a general consensus that only the tip of the skills-gap iceberg has been addressed. Not only are average skills levels low, but, in such an environment, there is a serious "brain drain" problem, in which the most technically adept individuals tend to migrate to the private sector, with its higher salaries. This phenomenon alone raises a particularly troublesome concern in a low-skill environment, where those interested in avoiding or evading the law are likely to remain significantly more adept than those charged with enforcing it. This issue is exacerbated by the relatively low status of the supervisory function in most FSU central banks, as well as the lack of budgetary and regulatory autonomy of these functions. Again it raises doubt that regulation and supervision can really be seen as an early stage foundation on which we can build other reforms.

21. ***Corruption.*** The potentially debilitating effects of corruption are at least as significant in the banking sector as in other areas of the economy - possibly more so, in light of the freer availability of wealth in more liquid, accessible form and the

capital leveraging potential which a banking license bestows on shareholders. Certainly, the FSU faces particularly severe issues of systemic corruption because of its history, the stresses of the transition, the opportunities presented by structural reforms such as privatization, and by political and economic volatility. Where controls and institutions are weak, the greater the discretion left in the hands of government officials, the greater are the opportunities for corruption. Unfortunately, Western-style systems of banking supervision incorporate many points at which supervisory officials are required to exercise substantial discretion. Experience in the FSU seems to indicate that supervisors have few inhibitions about imposing and enforcing the more modest of the sanctions legally available to them. However, they have demonstrated very considerable reluctance to deal with major abuses and, in particular, to address seriously the problems in larger and politically well connected banks at least until the abuses become so high profile that they are impossible to ignore. Corruption may not be to blame in all such cases but it certainly colors technical judgements in many of them.

C. An Alternative Regulatory System for Transition Banks

22. Under the difficult circumstances outlined above, it may be worthwhile to revisit the philosophical basis of banking regulation in the FSU and consider supplementing the current systems with a simpler, more proscriptive approach closely tailored to the special problems of the FSU countries. This could involve, at least at the outset, a system which places fewer analytical demands on the regulators (*e.g.*, less need to measure “capital” precisely or to classify loans accurately), combined with higher transparency of information and public disclosure of bank financial information.¹¹ It could, in particular, take particular note of the conception represented in the main paper that banking “safety” is all about the tension between the information processing capabilities of banks on the one hand, and the information ideally needed to monitor and manage the risks of particular products on the other. Thus, for banks which have not yet proved themselves to be capable of gathering, analyzing and presenting credible information about their financial position and loan portfolio to a reasonable standard,¹² permissible activities could be severely limited to those easily monitored by the regulators and presenting acceptably low risk, especially to depositors. Such an approach would compel these less sophisticated banks to remain in the Low Risk area, by virtue of their product mix.

23. Under such a system, for example, deposit-taking could be restricted to just a few banks which are demonstrably of good quality or which are capable of tight supervision. Contrast that with the approach prevalent in World Bank and EBRD credit lines which gives a few banks early access to funds for (higher risk) medium and longer term investment lending on the basis of the satisfaction of certain often

¹¹ In this connection, the feasibility of establishing privately-owned, domestic bank rating agencies should be explored in parallel with any official reporting of banks that may be required.

¹² In the case of the presentation of information this could be the familiar International Accounting Standards.

complex conditions -- conditions which are difficult to supervise adequately without incurring high additional costs.¹³ Where the system as a whole provides no safe alternative for household savings, it may be worthwhile to define an extremely limited form of permitted deposit-taking, incorporating 100% reserve requirements, invested in safe assets, for savings banks. A second example would be the denial of licenses for foreign exchange operations to any bank which could not demonstrate some minimal ability to deal with the additional risks involved. And no bank should be allowed to do any transactions in derivative securities without clearly demonstrating its abilities to engage in the information processing necessary to do so. Another example might be the prohibition of any deposit-taking on the basis of interest rate offers which were clearly unsustainable relative to prevailing rates of return on the country's economic activities.

24. Similarly, as bank skills are demonstrated to increase, increasingly less rigid controls could be applied and banks could be permitted a wider range of business transactions. Only when it is clear that a given bank possesses analytical skills, information processing capabilities and other characteristics commensurate with the products it seeks to offer (or perhaps comparable to its counterparts in developed market economies), should the regulatory regime of those economies be fully applied to such a bank. This would not only control risk at the individual bank level, but it would buy time for the regulators themselves to learn their trade better.

25. One merit of this approach is that it matches the "curiosities" of the incentives and behavior of transitional banking systems to the design of a transition-specific system of regulation. And significantly, just like Moliere's *Bourgeois Gentilhomme* who had spoken prose all his life without realizing it, several of the FSU countries have already invented the elements of this transitional regulatory system for banks. Some such as Russia and Ukraine have managed to concentrate household deposit taking in a limited number of banks which are then either restricted in their risk-taking behavior, or subject to intensified supervision. Others - again Ukraine is an example - employ a graduated system of banking licenses with the breadth of the license increasing as the capabilities of the bank concerned is shown to increase¹⁴. This provides a low cost way of limiting the risks generated in "doubtful" banks short of their closure or liquidation- both of which are far more problematic interventions. Russia, and (soon) Ukraine, have devised restrictions on bank resourcing though the issue of promissory notes.

¹³ An example is the FIDP project in Russia which has addressed the inadequacy of the supervision capacities of the Central Bank of Russia by establishing a specialized Bank Review Unit managed by foreign experts. This is a good approach but because of its costs is not easily replicable across a large number of banks.

¹⁴ Specifically, the Ukrainian licensing system recognizes 37 separate activities and very few banks are licensed to conduct all of these. Examples of the separately licensed activities include managing accounts and settlements of non-resident customers, receiving loans from other banks, accepting deposits from households, dealing in foreign exchange on the local markets, dealing in foreign exchange in offshore markets, conducting trust operations, opening bank branches inside Ukraine, opening branches offshore.

ANNEX 2

SOME INITIAL QUANTITATIVE RESULTS

1. In this Annex we attempt to relate our proposed framework to some of the more obvious tendencies which we have observed in the first 6-7 years of the transition on the FSU. This attempt is built around some stylized facts about the transition experience in two classes of FSU countries namely slow and fast reformers as defined more fully below. For the moment the evidence is taken mainly from three countries - Russia, Ukraine, and Latvia - the first two exemplifying slow reform and the last exemplifying relative rapid financial reform.

2. It is not possible to provide a unified representation of the transition that would be applicable to the financial systems of all FSU countries. However, there are important standard features some of which can be verified empirically. There are also clear distinctions in the responses of different FSU countries to the externally imposed components of the transition. For this purpose, we draw on the analytical insights derived from a two period model of saving and the associated specification of a dynamic transition path proposed by Patrick Conway.¹⁵ This is presented here in a simplified form in order to enable us better to connect it with the foregoing analysis. The Conway results about the broad macro and sectoral tendencies associated with financial transition are summarized in Column One of Table A1 at the end of this Annex. Column Two of Table A1 sets out our initial conjectures about how banks in the FSU might have been impacted by the main macro developments shown in the first column.

3. The conjectures set out in column two of Table A1 are all matters of direct relevance to our analytical framework as summarized in Figures 1 and 2. However, at this stage, they do not add up to a complete story about the transition. For this purpose much more institutional detail and country specificity would be required. However, they do permit us to assess some initial ideas which are amenable to empirical validation or, possibly rejection. We build up the story in stages.

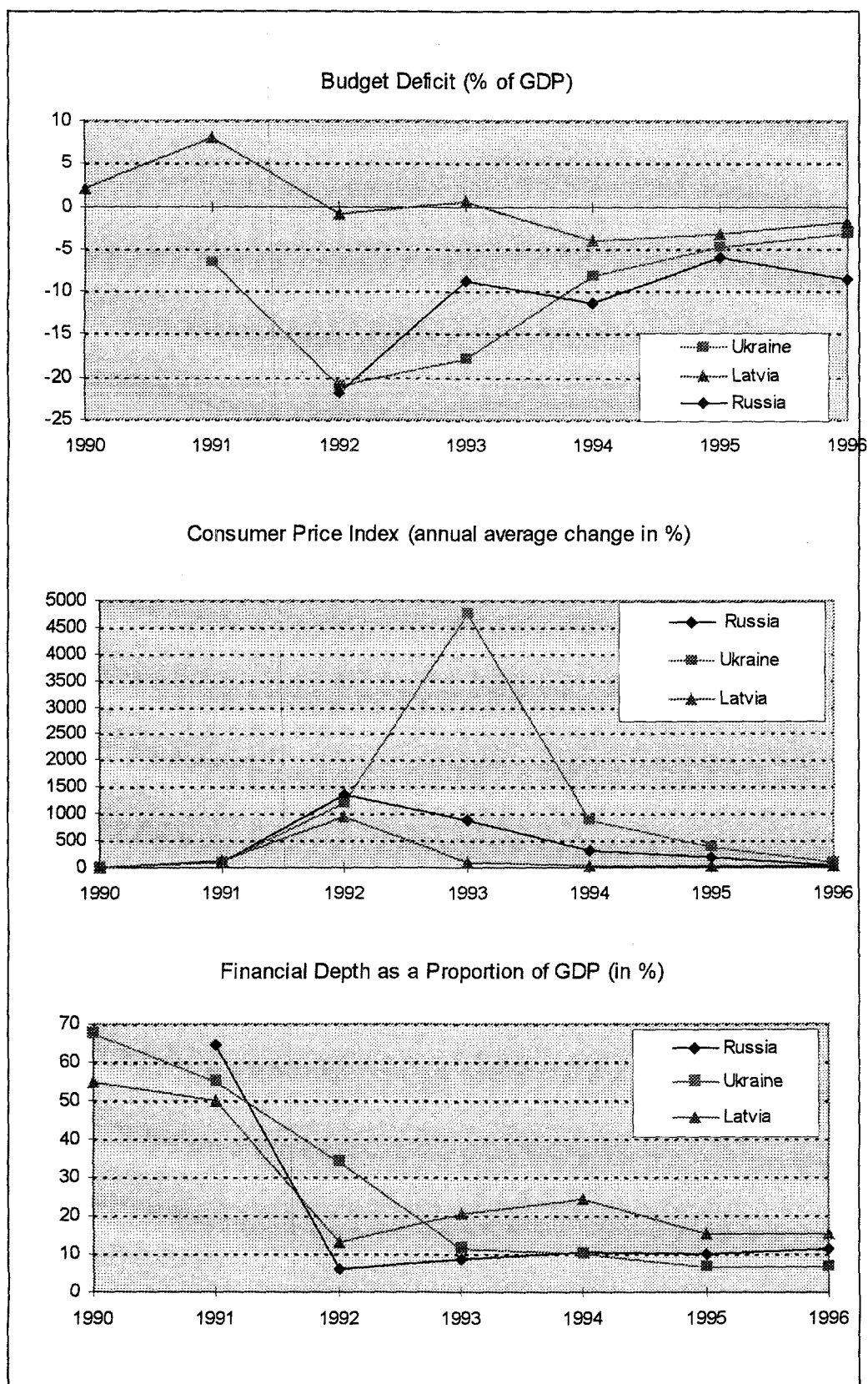
The Size of the Financial Sector

4. Most FSU countries suffered an immediate and major decline in the size of their banking sectors after the break up of the Soviet Union at the end of the 1980s in the manner indicated by Conway's analysis. (See column 2 of Table A1).

5. However, the extent and persistence of this decline differed greatly depending on the policy regimes after that date. This is evidenced by the selected indicators for three countries -Russia, Ukraine and Latvia - as shown in Figure A1 below.

¹⁵ Patrick Conway, "Saving in Transition Economies - Summary Report" Working Paper financed by World Bank Research Grant 679-07, March 1995.

Figure A1: Selected Economic Indicators - Cross Country Comparison



Sources: IFS, IMF Economic Reviews, World Bank Staff Calculations.

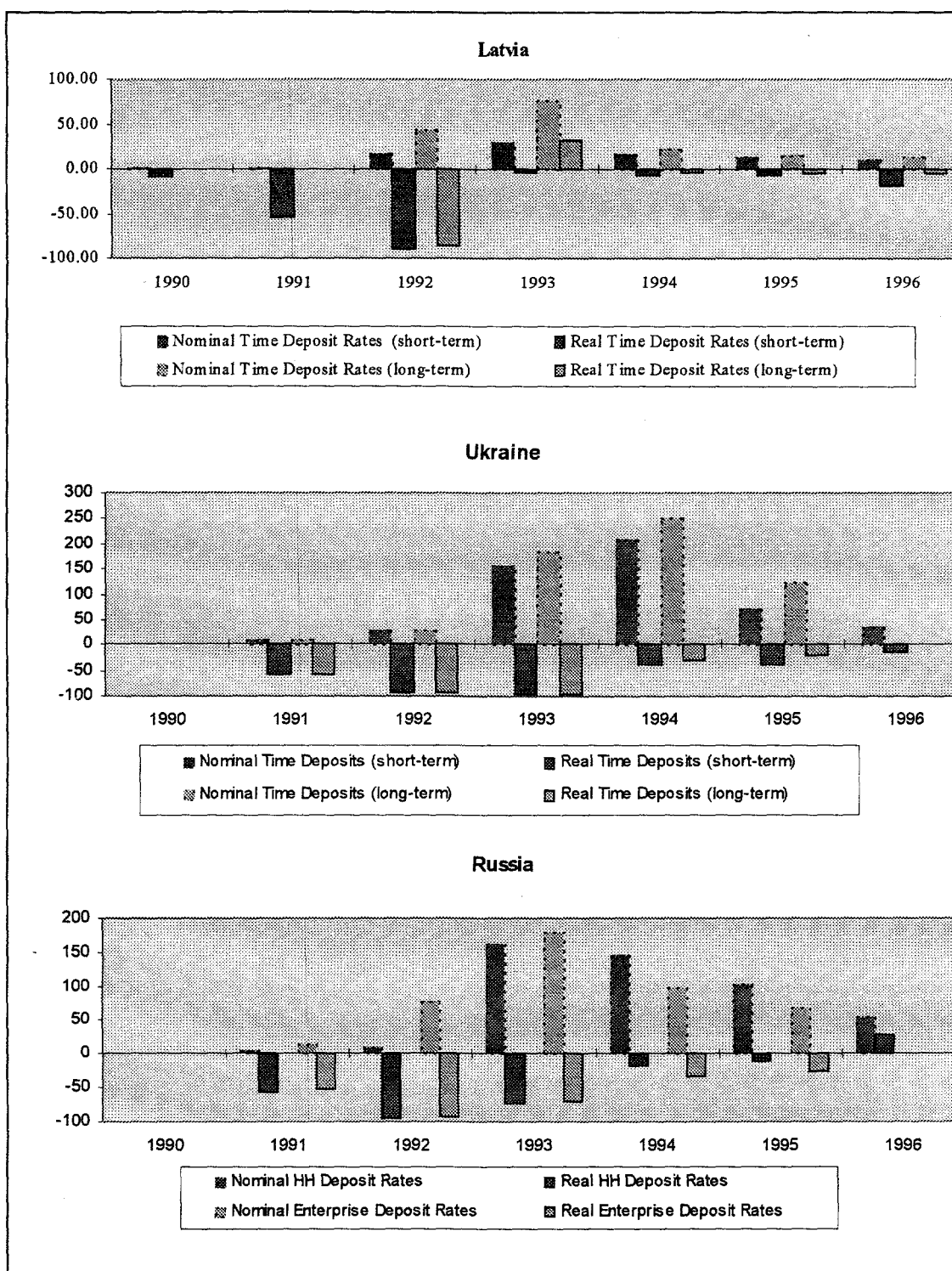
6. The bottom panel of Figure A1 shows the decline in financial sectors associated with the general price liberalization and suggests that Russia suffered the largest declines followed by Latvia and Ukraine. But this initial impact started to be reversed almost immediately by the faster reforming Latvia. By contrast, Ukraine - initially the least badly affected of the three - saw on-going declines which reduced that country's banking sector to the smallest of the three by 1994. The reasons are mainly linked to the inflation experience which in turn was directly affected by the speed of correction of their respective budget deficits. (i.e. differences in the stage 3 behavior as described in the TableA2) Latvia's budget deficit never became large relative to GDP and through the mid 1990s was confined to a few percentage points of GDP. (See panel 1 of Figure A1). By contrast, the deficits in Russia and Ukraine became huge after 1992 and remained large (as well probably as being understated) through most subsequent years. The extremely slow budget adjustment in Ukraine seems directly associated with the near hyper inflation experienced in 1993 and 1994 - an inflation which is directly responsible for the catastrophic further decline in the financial sector through 1995.

7. However, our analytical framework enables us to suggest that three factors probably mitigated the dangers of systemic crisis in the slowest of the reforming countries - Ukraine amongst these three comparator countries. First slow progress on stabilization was mirrored in slow progress on privatization and other structural reforms. Hence the pressures on banking system safety were diluted by the continued insulation of "banks" under the wing of the state - the countries' banks remained near the left and the bottom of the distribution of banks shown in Figure 3 in the main body of the paper. Second, the very high inflation had the effect of eroding the accumulated bad loans of the banks and making these extremely small (as were total bank loans) relative to the countries' levels of GDP. It is true that bank capital was also eroded by the same mechanism but this mattered less because of the tight integration of banking activity and the state which we have already mentioned. Third, interest margins and other sources of bank profitability were sustained by the ongoing distortions in the economy and the ongoing volatility of many key prices including that of foreign exchange.

Deposit Mobilization

8. This divergence in the risk characteristics of the three FSU countries had an obvious counterpart in their abilities to mobilize deposits. As Figure A2 indicates, in Latvia real interest rates on deposits never became significantly negative and some rates were positive in real terms as early as 1993. By contrast, neither Russia nor Ukraine achieved positive real interest rates (based on measured inflation) until 1996. Furthermore, the inflation experiences of these two countries suggest that real interest rates calculated on the basis of peoples expectations about inflation, remain significantly negative even today. The demon of inflation is certainly not driven out of these countries and the public are quite rationale in expecting that actual inflation will sooner or later rise to much higher levels than today we observe.

Figure A2: Development of Real and Nominal Deposit Rates in Latvia, Russia, Ukraine 1990 - 1996 (per annum/in %)



Sources: IFS/IMF Economic Reviews, EBRD Transition Report 1996, World Bank Staff Calculations.

9. This set of developments in turn had a major impact on the levels of voluntary (and especially household deposits) in the banks of the three comparator countries. See Figure A3. By 1993/1994, Latvian banks had already re-built household deposits to amounts equal to 10-12 percent of GDP. The corresponding percentages in Russia and Ukraine were only 1-2 percent of GDP. Again this difference confirms the enormous divergence in the riskiness of the different banking sectors only 2-3 years after their transitions began.¹⁶ In Russia but especially in Ukraine, there was at most a trivial systemic risk associated with the banks' exposure to household deposits. This risk was even more diluted by the continued concentration of the majority of household deposits in the Sberbanks of the two countries both of which offered full deposit insurance. It did not matter much that the banks of those two countries were relatively poorly managed and subject to only embryonic regulation.

10. By contrast, in Latvia, the emerging, and still inexperienced and poorly regulated private banks rapidly acquired resources from private depositors equivalent to over 10 percent of GDP at a time when systemic risk was also high because of the transition factors outside the control of bank managements (i.e. the factors conditioning the position of the risk frontier in Figure 2 of the text). It is easy to see in terms of our conceptual framework why Latvia was more exposed to banking crisis than the other two countries.¹⁷ Specifically, in the case of Latvia the growth of real credit in the years 1993 and 1994 was highly positive whereas in both Russia and Ukraine the corresponding rates of growth were highly negative. The ratio of credit outstanding to GDP rose in Latvia from 11.7% in 1992 to 22.6% by 1994. In Russia that same ratio fell by about a third and in Ukraine during the same two year period it fell by over 60%. Latvian banks needed rapidly to find new customers or to greatly increase their exposures to existing customers - a pressure which is well known to have caused banking portfolio difficulties in other countries. Early access to Forex denominated resources from abroad exacerbated the pressures to early expansion.¹⁸

3. Emerging Innovations in Banks.

11. The conjecture about bank behavior which we have derived from the Conway model (see column 2 of the Table A2) suggest that the banks losing deposit resources as financial depth generally declines, might face pressures to move into riskier activities in an attempt to restore their positions. Additionally, there are numerous other pressures which might encourage a shift to riskier banking in the early stages of transition. These are discussed in the text and include privatization and the possible

¹⁶ Fleming, Chu and Bakker observe that one factor which pushed banks in Latvia into ill-advised lending was the ease of availability of foreign credit lines. We would suggest that this was not a fundamental cause but rather was derivative from Latvia's early progress on reform which increased confidence in banks before the information processing skills of the bankers were such as to justify this confidence. Alex Fleming, Lily Chu, and Marie-Renee Bakker, *The Baltics - Banking Crises Observed*, Policy Research Paper, 1647. World Bank, September 1996.

¹⁷ It is more difficult to be categorical about specific sources of those dangers. In the case of interest rates, real deposit rates were either positive or slightly negative after 1994 but lending rates on average were substantially positive in real terms. This means that any borrowers whose output prices were rising at rates below general inflation faced high real rates - a possible source of adverse risk problems for the Latvian banks.

¹⁸ Fleming, Chu, and Bakker, op. cit.

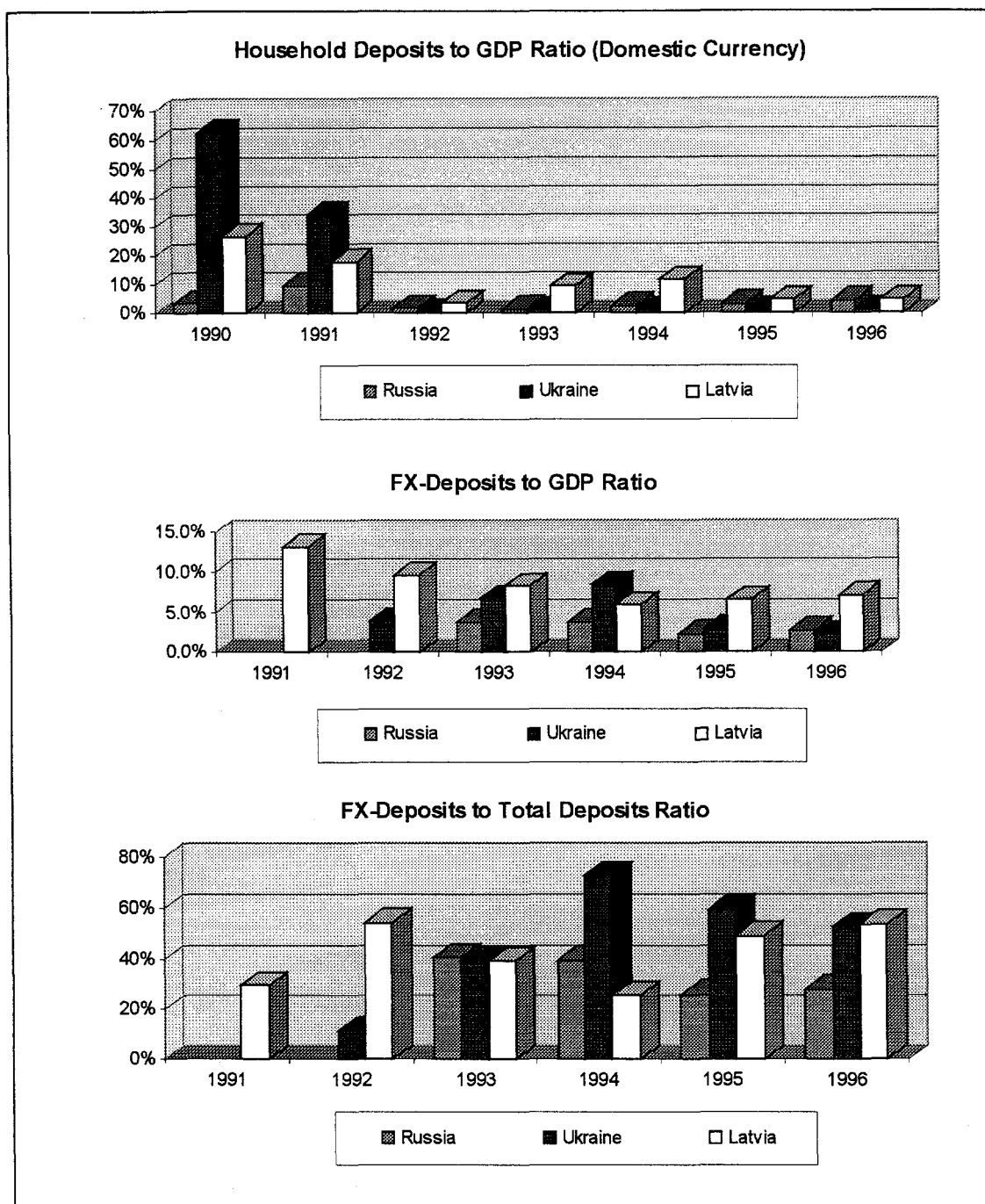
loss of established clients, increased stability in interest rates and exchange rates reducing the scope for speculative profits, and above all the weakening of the relationships with the body politic. The evidence from the two slower adjusting countries (Russia and Ukraine) suggests that the banks, in spite of lower volumes of business after 1992, nonetheless enjoyed high margins and achieved high rates of profitability on the basis of the continued distortions in the system. These distortions arose in turn both from the slow progress in reducing inflation (including volatile foreign exchange rates and the ongoing shortages of foreign exchange), and from the slow pace of some structural reforms. The major banks in Ukraine, for example, continued through 1995, to attract very cheap rediscounts from the Central Bank for on-lending to those activities targeted for direct credits. However in spite of this, the greatly reduced volumes of banking business also stimulated certain innovations in banking activity most of which were relatively high risk.

12. As a first example of this, banks found that they could overcome the unwillingness of the public to hold local currency deposits by instead mobilizing deposits in foreign currencies. The scope for doing this was limited - capital flight was a more complete hedge for private savings against the risks endemic in these countries in the early tentative stages of reform - but nonetheless Forex borrowing did offer banks a way to gain resources for on-lending. In Ukraine, for example, by 1994 foreign currency deposits were the equivalent of 8.5 percent of GDP. Because of the large excess demand, the margins on these resources were very high and were the source of substantial profits for the banks. The position in each of the three comparator countries in this regard is summarised in Figure A3 below.

13. The foreign currency activities of the banks was probably not a significant source of excessive risk at that time. It was relatively easy, given the excess demand, for Forex resources for banks to match their asset and liability exposures. For the same reason, the credit risks on their lending were limited by the banks' abilities to cherry-pick their borrowers. The risks to banks were also diluted by the status of many of them as still-integrated with the state system. But even if this had not been true the size of the total resources banks had to on-lend (even allowing for their Forex borrowings) remained quite a lot smaller than was the case in the faster reforming economies exemplified by Latvia.

14. A second innovation which also increased bank risks was the increased resort to inter-bank borrowings. Such borrowings were used extensively during 1993-96 in banks in the slower reforming economies to escape from their tight resource constraints. This was a financial innovation which was not well based on the information processing skills of the banks. The banks which acted as the main sources of the funds, in many cases, were particularly ill-equipped to assess the creditworthiness of the banks to whom they were lending. Hence the increased bank lending to final borrowers, made possible by inter-bank loans, constituted an important

Figure A3: Development of Household and Foreign Exchange Deposits (1990 - 1996)



Sources: IFS/IMF Economic Reviews/Ukrainian Economic Trends/Latvian, Russian and Ukrainian Central Banks' Publications/World Bank Staff Calculations.

increase in risk in lending banks if not in the whole sector. The main victim banks in this respect seem to have been the Sberbanks of the slower reforming countries. These banks had two characteristics which made them important suppliers of funds to the

resource-constrained banks. First, they still had quite a significant volume of households deposits at their disposal. Second, they had relatively little experience of direct lending on their own account (e.g. to enterprises). Thus, lending in the inter-bank market often seemed like a good way to use surplus resources.

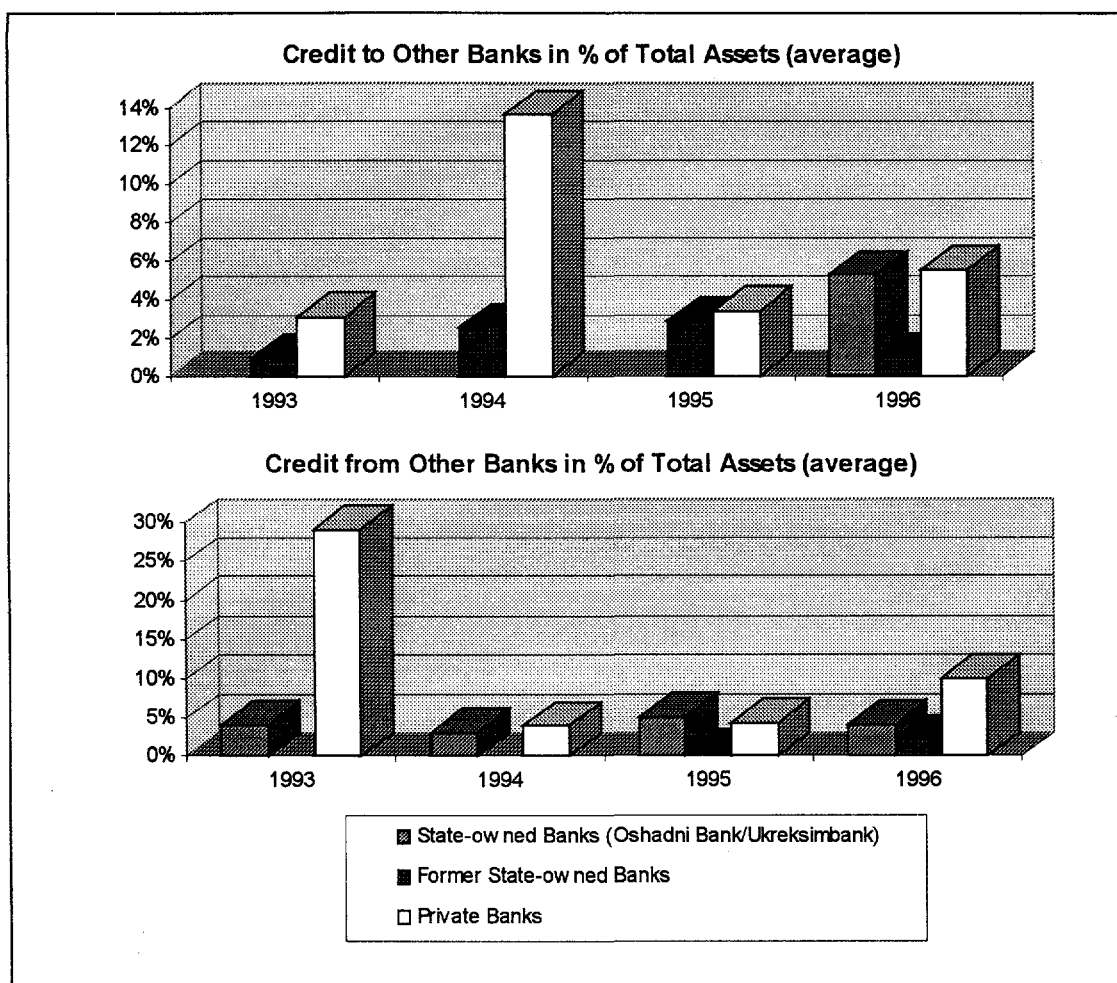
15. In Ukraine, and probably in Russia, the major borrowers in this market during the 1993-1996 period seemed to have been the newly emerging private banks. Most of these banks had little access to household deposits and many of them did not enjoy the resourcing available through the management of budgetary funds and directed credits. This is exemplified in Figure A4 below. It is noted from this that the inter-bank borrowings of the three private banks shown there were generally high as a proportion of total assets during the early transition years to 1996. In the former state banks by contrast, the borrowed amounts were generally smaller and showed less tendency to rise as transition proceeded since they were able to resource themselves from budget funds and, in some cases, private deposits.

16. In the mini banking crises experienced in Russia and Ukraine in 1995 and 1996, inter-bank borrowings seemed to have been the main route whereby problems in one or two banks (e.g. Inko and Alex banks in Ukraine) were communicated to the banking system more generally. However, because of the minimum absolute size of the banks and their inter-bank transactions, these problems were easily contained.

17. A third and more damaging innovation which so far has mainly affected Russia beginning in 1995 was the introduction of the “veksel” (promissory note). These are bearer IOUs issued mainly by banks or brokerage houses at a discount of the face value at which they can be redeemed on maturity (normally 6-9 months). The Russian veksel support a system of non cash payment which in 1995 had a turnover estimated at 20 percent of GDP.¹⁹ Once in circulation they can be used as a substitute for cash payment by any enterprise or organization which happens to become the temporary owner. They have been fairly readily accepted in an environment of generally low compliance with payments obligations. However, there are many risks inherent in this parallel system of payments.

¹⁹ The Wall Street Journal notes that one Veksel issued by Tveruniversalbank with a face value of \$10,000 had changed hands no less than 23 times and had financed more than 20 times its own face value in payments by the time that it matured.

Figure A4: Development of Interbank Lending in the Ukrainian Banking Sector



Sources: IFS/Finansovye Riski.

18. The one exemplified by the most dramatic of the Russian banking failures - that of Tveruniversalbank in 1996 - is that the inept investment of the funds available to the issuing bank (equal to the discounted value when the IOU is issued) will result in inadequate funds to repay the par value at maturity. As the volumes of IOUs in issue increase this danger becomes more and more substantial since the system depends on sustained rates of return sufficient to cover the discounts which the issuing bank needs to offer. The banks need to achieve these returns at a stage in the transition when their own management competencies are still likely to be questionable. Hence over-issue is a real possibility. At the time of the Tveruniversalbank failure the IOUs outstanding against that bank amounted to 600-800 billion rubles - over \$100 million.

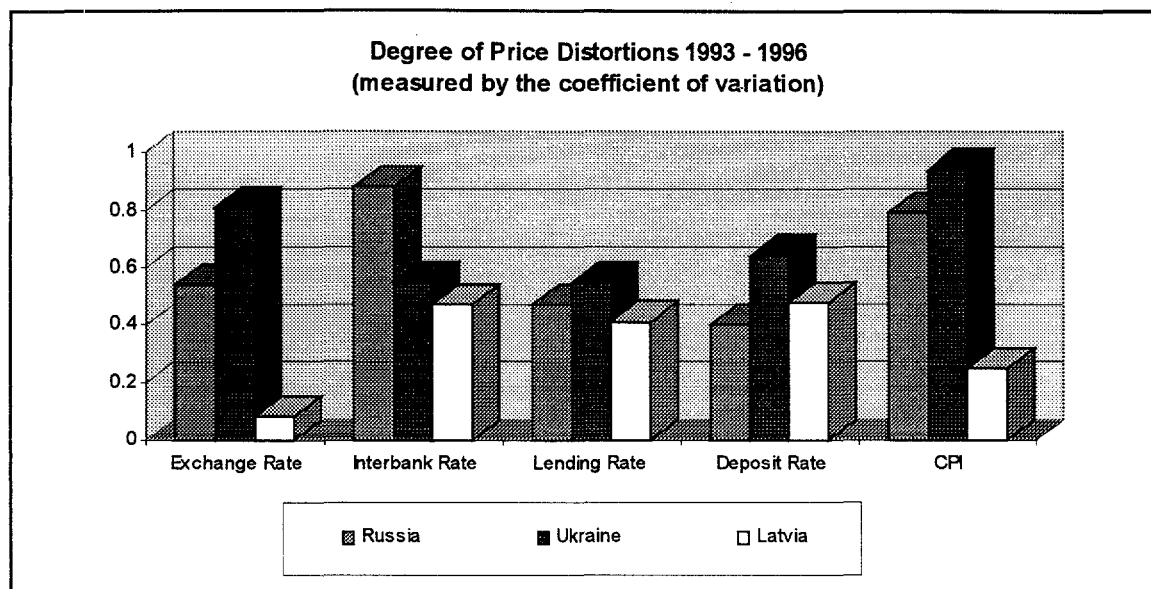
19. In short each of the three innovations just described can be seen as premature in terms of the ability of the banks to monitor and manage the risks to which they were exposing themselves. In all three cases, many of the participating banks moved ahead of their own abilities in terms of risk management skill needed to make effective use of innovations. This resulted in a number of individual banking crises and some limited system-wide problems. The fact that these problems were not more serious in Russia and Ukraine is attributable solely to the very small scale of total banking activity by the time that these mini crises occurred.²⁰ By contrast, the Latvian banking crisis in 1995 was both more severe in its impact because of the much larger volume of household deposits already at risk, and also more traditional in its causation and origins.

Economic Factors Affecting the Risk Frontier

20. Another important contrast between the three comparator countries relate to their differential situations regarding the economic influences on the position of the risk frontier of Figures 1,2 and 3 in the paper. This is indicated in Figure A5 which measures the degree of volatility of certain important prices and interest rates based on quarterly data from 1993 to 1996. The figure reveals the very considerable economic turbulence in all three countries during this four year period. Most of the indicators have a coefficient of variation (standard variation divided by the arithmetic mean) of at least 0.5 which implies that the level of the indicator has shown a large amount of variation from its average level. However, for almost all indicators, the degree of volatility is shown to be much greater in the two slower reforming economies - Russia and Ukraine - than in the faster reforming Latvia. These differences are enough to suggest that the risk frontier facing Latvian banks has been positioned lower down. (in Figures 1,2 and 3 in the text) than the corresponding frontiers facing Russian and Ukrainian banks. To the extent that Latvian banks nonetheless encountered serious problems in 1994 and 1995, this is attributable more to their own internal inadequacies than to the external environmental factors: a very important distinction.

²⁰ This is not to suggest that the mini crises in Russia and Ukraine were entirely without cost. On the contrary those crises probably contributed to a stop-start system of banking development which has delayed the recovery of financial depth and the slightly more relaxed monetary management which can accompany this.

Figure A5:



Source: IFS

21. In particular, Latvia's early success in reducing inflation has meant that it has achieved reasonably well anchored and predictable values for two important economic indicators namely the exchange rate and the consumers price index (CPI). This in turn should have been a factor diluting the risks faced by Latvian banks in their evaluation of clients. By contrast, Russia and Ukraine have experienced high volatility of these two and most other economic indicators - a source of a additional risk to the banks in these countries. The volatility of rates in the Russian inter-bank market has been particularly high and this is indicative of the considerable pressures on that market which have arisen as the mini-crises referred to earlier have evolved. Not only has reliance on this market been a source of credit risk to the participating banks but it has also been a source of risk in terms of the volatility of the interest rates which have applied. Russian and Ukrainian banks largely avoided major problems, in spite of this inhospitable environment because of their relatively conservative lending behavior and the small scale of the total resources they had available for on-lending.

Conclusions from the Empirical Analysis

22. This paper has presented and explained a simple framework, based on informational theory, to try to account for the behavior of banking systems in transition economies such as those in the FSU. The perceived advantage of this new framework is that it provides some basis both for defining the nature of the transition itself, and for explaining differential developments in countries beginning their sectoral reforms from essentially similar starting points. This should help us to get away from approaches which have generally been silent about the nature of the transition itself. It

should also help to explain differential financial sector performance in different countries.

23. The empirical evidence adduced in this Annex is admittedly limited at this stage. It has been included in the paper mainly to suggest specific hypotheses for more in-depth testing across a wider range of countries. However, it has been sufficient, even at this initial stage to lend support to a number of important propositions about the transition process. In particular:

- Group A countries (slower adjusters) in the FSU have definitely seen larger declines in the sizes of their banking sectors than Group 2 countries (fast reformers). This is because of the longer period of negative real rates of interest following the initial commodity price rises associated with price liberalization in 1992 and the more prolonged need for governments to use inflationary methods to finance large deficits.
- Group A countries nonetheless seem to have been less prone to systemic banking crises because of the very small size of household deposits; the concentration of these in a single Sberbank; the limited informational problems associated with the type of lending which they do; the implicit under-writing of many bank loans to SOEs by government; and the high margins and profitability associated with distorted prices (including Forex). The increased risks to which banks in these countries have exposed themselves through increased Forex activity, ill-considered inter-bank transactions etc. have been diluted in their practical consequences by the same factors.
- Group B countries (faster reformers) can be expected to experience systemic crisis earlier because of the larger size of their banking systems; their greater exposure to household and other voluntary deposits (making bank runs more likely); their earlier exposure to positive real interest rates and the associated adverse selection problems; and the greater pressures they faced because of tighter fiscal positions. Even when the general economic context in which they function is relatively stable and predictable, the evidence from Latvia indicates that inadequate information processing and risk management in the banks themselves can easily be the trigger for the crisis.
- Specific cases of banking crises are more likely in systems where a fairly rapid growth of bank lending is taking place but before internal bank controls (and associated regulation and supervision) are strong enough to deal with the inherent combined riskiness of the banks' operating environment and their attempted rapid growth.

24. A related proposition which has not yet been exposed to any testing is that banks in Group B countries (faster reforming), where enterprise privatization proceeded rapidly faced two additional but competing pressures on their safety.

Privatization would have intensified the informational problems associated with bank lending (leading to greater risk), but it would also have accelerated the pace of enterprise restructuring which should have lessened risk.²¹ Similarly, banks in countries where liberalized foreign exchange markets resulted in highly volatile exchange rate movements were more likely to face more serious banking sector problems, especially when this high volatility was associated with highly positive real rates of interest, rapid privatization and a rapid growth of interest in real terms. The privatization of banks themselves presents additional questions. When such privatization, or corporatization, is done early in the transition as in Russia, the new owners are likely retain important links with SOEs and the government. However, they will also face considerable pressures to move the bank into new forms of activity at just the time they are losing their formal protection from state institutions. This combination of factors would seem to have the potential to stimulate substantial movements along the horizontal axis of Figures 1 and 2 towards riskier activities.

²¹ This is a significant conclusion of the paper by G. Pohl, R. Anderson and S. Djankov, *Privatization and Restructuring in Central and Eastern Europe*, World Bank Technical paper, No. 369, 1997.

TABLE A2

STYLISTED FACTS ABOUT THE FSU TRANSITION

Systemic/Macro Developments	Selected Impacts On Banks And NBFIs And Other Related Developments	Approximate Dates
<i>Pre-1991: Introduction of two-tier banking system</i>	Transfer of assets from mono-bank to newly created commercial banks that also inherited a stock of non-performing loans	1989-91
<p><i>Stage 1: Generalized Price Liberalization</i></p> <p>Effects included:</p> <ul style="list-style-type: none"> Higher price level (P) rapidly eliminated much of money overhang (i.e. the difference between money balances actually held by the public and those that they would optimally have chosen to hold) and the associated excess demand for commodities; 	<p><i>Stage 1: Generalized Price Liberalization</i></p> <ul style="list-style-type: none"> The general increase in economic uncertainty caused by liberal (and now unpredictable) prices gave rise to an immediate intensification of adverse selection and moral hazard problems. smaller monetary aggregates and reduced banking system liabilities - Sperbanks as the holder of most household deposits was most seriously affected by this fall. Early foreign exchange market liberalization in some countries was a further source of additional uncertainty and risk. 	January 1992
<p><i>Stage 2: Increase in Government Dis-saving depending on country)</i></p> <p>Causes were:</p> <ul style="list-style-type: none"> lower production and income levels resulting in lower tax revenues; larger deficits in State Enterprises (SOEs) caused by failure to adjust wages and employment levels to correspond with reduced levels of production (this affects the quasi-fiscal deficit but may not be captured in the measurement of the fiscal deficit). <p>Effects were:</p>	<p><i>Stage 2: Increase in Government Dis-saving depending on country</i></p> <ul style="list-style-type: none"> Output deflation resulted in a deterioration of the net worth positions in enterprises and a corresponding deterioration in the quality of bank balance-sheets. Deteriorating net worth in SOES caused deteriorating balance sheets in banks 	1992-1993/95

- increased use of inflation tax to finance Government fiscal and quasi fiscal deficits (in the absence of non-inflationary routes to achieve this financing);
- negative real rates of interest given low (and often still controlled) nominal rates and ongoing inflation;
- (in some countries) the extensive use of directed credits through some state or former state banks (partly refinanced by Central Bank credits).
- Negative real rates of interest made it more difficult for banks to attract voluntary deposits in local currency and further undermined one traditional source of profit. This in turn was a possible motive for intensified risk taking. This problem was partly one of currency substitution by depositors.
- significant enterprise balances in these banks benefiting from directed credits (i.e. a power shift from the Sperbanks which depended on household deposits to the Lending banks which depended on enterprise deposits);
- Access to directed credits and associated subsidized funds via Central Bank rediscounts compensated some banks for losses of household resources and provided a new source of profit. This new source of resources and profits was also arguably relatively safe because of the implicit or explicit guarantee from government.

Stage 3: Ongoing High Inflation for 5-6 years (depending on country)

Here we need to differentiate the effects as between Group A countries (those relatively slow to reform and adjust) and Group B countries (faster reformers). The later group was also likely to achieve an earlier stabilization of inflation.

Effects were:

Group A: countries which adjusted **more slowly** (in terms of the liberalization of markets, the reduction of fiscal deficits, the privatization and enforcement of hard budget constraints in enterprises, and their resulting poor access to external donor funding).

Stage 3: Ongoing High Inflation for 5-6 years (depending on country)

- The banks' difficulties in attracting voluntary deposits intensified and placed further pressures on them to move into riskier forms of activity.
- There was some reduction in the systemic risks associated with the banking sector due to the new lower scale of probable losses and also because of generally high interest margins.

1992-1996 (depending on country)

²² i.e. the equilibrium that was determined by the initial set of economic conditions applying in 1991 at the start of the transition. The equilibrium was not achieved then because of controlled commodity prices (resulting in excess demand for commodities and an associated involuntary holding of money balances).

- High rate of inflation due to continued large monetary financing of deficits, continuing negative real rates of interest, continued pressures from non-disciplined SOEs, and the break up of the ruble zone in 1992/93 (which created the possibility for money creation independently of the Central Bank of Russia);
- Further adjustment towards some initial equilibrium²² in the public's holdings of money balances, **plus** a shift in that equilibrium towards a lower (optimally) desired level i.e. a further shrinking of the banking sector from the resourcing side;
- The inflationary write-down of bank loans and other assets as well as bank capital i.e. a shrinkage of banking from the assets side of the balance sheet

Group B: in countries which adjusted **more rapidly** there were several important differences compared to the Group A (slow adjusting countries). These included:

- Smaller Fiscal Deficits (because of early fiscal adjustment);
- Less pressure from quasi fiscal deficits (because of earlier disciplining of SOEs);
- Easier and less inflationary financing of fiscal and quasi fiscal deficits because of early access to significant resourcing from domestic re-monetization and external donor agencies;
- Lower reliance on the inflation tax resulted in less negative real rates of interest or an earlier move to positive real interest rates;
- More favorable interest rates and less inflation uncertainty reduced the scale of the further dis-intermediation - i.e. banking/financial sectors shrunk less.

Stage 4: Inflation Stabilization

Methods of achieving this included:

- Reduced fiscal and quasi fiscal deficits;
- Increased reliance on foreign borrowing (mainly public but later private in some countries) which allowed a higher volume of imports to dilute price pressures via commodity demands and supplies;

- In cases where rinterest rates became very high, there was a direct increase in problems of adverse selection and moral hazard.
- Banks became more active in FOREX deposit taking and lending and thereby escaped some of the down-sizing otherwise associated with de-monetization and currency substitution. In the process they gained access to potential FOREX profits (through high margins and open positions) but also exposed themselves to new risks.

- The greater incidence of bank lending to newly privatized companies increased banks' informational problems especially in countries where there was a rapid expansion of such lending.
- However in those enterprises where restructuring took place, the net worth positions improved as did the balance sheets of the banks

Stage 4: Inflation Stabilization

- Tighter money caused a large build up of inter-enterprise and enterprise:government arrears and so created a kind of substitute banking sector

1992-1994
(depending on
country)

1992-1996
(depending on
country)

- Reduced monetary financing of fiscal and quasi fiscal deficits;
- Increased use of non-monetary financing instruments including Treasury Securities.
- Generic reforms such as privatization and liberalization which take some pressure off deficit financing and the need for active use of the inflation tax.

The results in the **slower adjusting** countries as defined above included.

- High nominal and real rates of interest caused in part by slow decline in inflationary expectations;
- Ongoing and large reductions in levels of production associated with the severity of the delayed adjustment);
- Pressures on the earnings and liquidity of banks which responded to Stage 3 above by (i) becoming more dependent on directed credits and the counterpart enterprise and budget balances as a source of resources; and (b) profiting from unstable exchange rates.

- In cases where Treasury Securities were launched in a climate of still - high interest rates, they provide the banks with a substitute asset offering low risk and high return

- A direct increase in problems of adverse selection and moral hazard.
- A further deterioration of the net worth positions in enterprises and a corresponding deterioration in the quality of bank balance-sheets.
- A declining ability of banks to use the directed credits and the government guarantees as both a resource and a source of profit.
- In cases where the Treasury Securities were launched, they provide the banks with a substitute asset offering low risk and high return

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